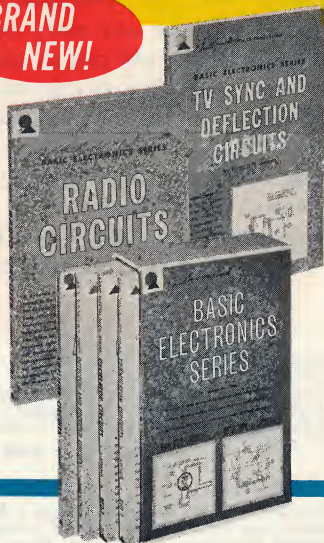


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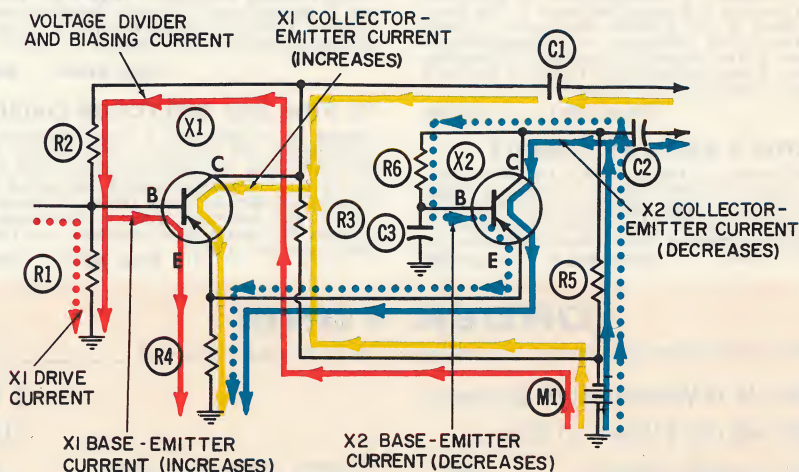
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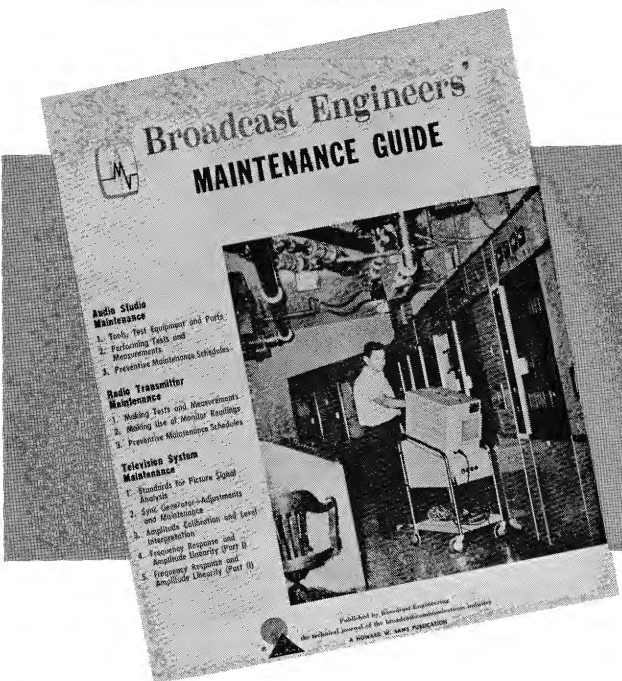
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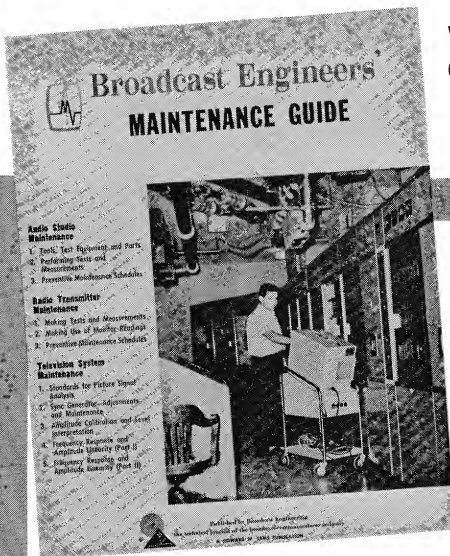


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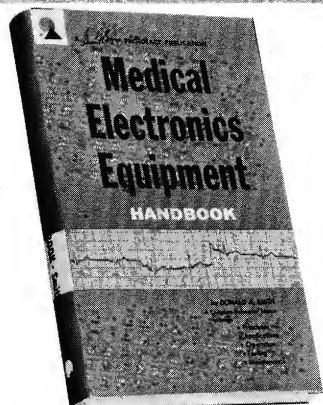
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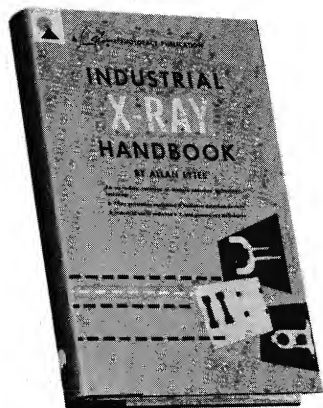
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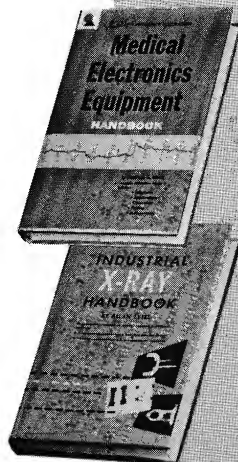
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NEW BEDFORD

C. E. Beckman Co.
11-35 Commercial St.
Burns Electronic Supply Co.
349 Kempton St.
E. A. Ross and Co.
1663 Purchase St.

NORTH ADAMS

Electronic Supply Center
32 River St.

NORTHAMPTON

C & I Distributors, Inc.
228 Pleasant St.

NORTH WESTPORT

DeMambro Radio Supply, Inc.
95 State Rd., G.A.R. Highway

NORTH WOBURN

Abbott Electronics Co.
85 Elm St.

NORWOOD

Jason Electronics Supply Co., Inc.
810 Providence Hwy., Rte. #1

PEABODY

Tee-Vee Supply Co.
39 Main St.

PITTSFIELD

Pittsfield Radio Co.
41 West St.

QUINCY

Pilgrim Electronic Supply Corp.
26-28 School St.

RAYNHAM

David B. Dean and Co.
Rt. 44, Near Expressway

SALEM

DeMambro Radio Supply, Inc.
280 Highland Ave.

SPRINGFIELD

Del Padre Supply of Springfield
999 Worthington St.
DeMambro Radio Supply Co., Inc.
169 Spring St.
Soundco Electronic Supply Co., Inc.
147 Dwight St.
Springfield Radio Co., Inc.
405 Dwight St.
Sydlee Electronics Supply Corp.
453 Worthington St.

WALTHAM

Durrell Electronics, Inc.
922 Main St.

WORCESTER

DeMambro Radio Supply Co., Inc.
222 Summer St.
Johnson Electronic Supply Corp.
12 E. Worcester St.
Radio Electronic Sales Corp.
52 Chandler St.
Radio Maintenance Supply Co.
80 Thomas St.

CONCORD

Evans Radio, Inc.
Route 3A at Bow Junction

DOVER

DeMambro Radio Supply Co.
286 Central Ave.

KEENE

DeMambro Radio Supply Co.
300 West St.

MANCHESTER

DeMambro Radio Supply, Inc.
1308 Elm St.
Radio Service Laboratory
670 Chestnut St.

ATLANTIC CITY

Kepco
300 N. Mississippi Ave.
Radio Electric Serv. Co. of Atlantic City, Inc.
452 Albany Ave.

BERGENFIELD

JerseyElectronic Distributing Co.
50 E. Main St.

BERLIN

Midstate Radio Supply Co.
157 W. White Horse Pike

BLOOMFIELD

Berger Electronic Supply
241 Bloomfield Ave.
Variety Electronics Corp.
One State St.

BRADLEY BEACH

Aaron Lippman and Co.
504 Main St.

NEW HAMPSHIREBRIDGETON

Midstate Radio Supply Co.
653 N. Pearl St.

BURLINGTON

Lee Electronics
Rt. 130 and Lincoln Ave.

CAMDEN

Almo Radio Co.
1133-37 Haddon Ave.
General Radio Supply Co., Inc.
600 Penn St.
LaFayette Radio Corp.
305 Broadway
Radio Electric Service Co. of N.J., Inc.
513 Cooper St.
Radio Electric Service Co.
30 Market St.

NEW JERSEYDENVILLE

Lashen Electronics, Inc.
38 Broadway

EAST BRUNSWICK

Gem Electronics of Brunswick, Inc.
Route 18

EAST ORANGE

Gem Electronics of East Orange, Inc.
438 Central Ave.

FAIR LAWN

Key Electronic Supply Corp.
0-115 E. Amsterdam Ave.

HACKENSACK

Emsco Electronics, Inc.
14 Essex St.
Nidisco Hackensack, Inc.
55 State St.

HIGHLAND PARK

Aaron Lippman and Co.
1001 Raritan Ave.
William Radio Supply Co.
265 Woodbridge Ave.

HILLSIDE

Leader Electronic Supply Corp.
5 Evans Terminal Rd.
Sherwood Dist., Inc.
1210 Liberty Ave.

JERSEY CITY

Nidisco Jersey City, Inc.
713 Newark Ave.

LITTLE SILVER

Coast Electronic Dist., Inc.
50 Birch Ave.

MORRISTOWN

Jet Electronics
66 Morris St.

NEWARK

Federated Purchaser, Inc.
114 Hudson St.
Krich-New Jersey, Inc.
428 Elizabeth Ave.
LaFayette Radio Corp. of N. J.
24 Central Ave.
Aaron Lippman and Co.
99-107 Newark St.
Star Electronics Co.
527 Springfield Ave.

NORTH BERGEN

American Distributing Co.
6335 Hudson Blvd.

OCEAN GROVE

Asbury Electronic Supply
108 S. Main St.

PARAMUS

Gem Electronics of New Jersey, Inc.
385 Rt. 17 at Midland Overpass
LaFayette Electronics Corp.
182 Route 17

PASSAIC

Nidisco Passaic, Inc.
294 Passaic St.

PATERSON

Jersey Electronic Distributing Co.
74-86 E. 30th St.
N.R.M. Wholesale Radio, Inc.
35 Madison Ave.
Witmal Electronics Corp. - N. J.
394 Main St.

PENNSAUKEN

Penn Electronics Parts Co.
Rt. 130

PERTH AMBOY

Bennett's Radio Supplies
224 Market St.

PHILLIPSBURG

Carl B. Williams Co.
465 S. Main St.

PLAINFIELD

LaFayette Radio Corp. of Plainfield
139 W. 2nd St.
Union Television Parts Co.
800 South Ave.

RED BANK

Monmouth Radio Supply Co.
404 Shrewsbury Ave.

RIDGEFIELD

Nidisco Cliffside Park, Inc.
484 Bergen Blvd.

RIDGEFIELD PARK

N.R.M. Wholesale Radio, Inc.
284-288 Teaneck Rd.

ROSELLE

Aaron Lippman & Co.
114 Locust St.

SHREWSBURY

Federated Purchaser, Inc.
483 Broad St.

SOMERVILLE

Masters TV Supply Co.
Depot Square and Division St.

SPRINGFIELD

Gem Electronics of Springfield
U. S. Route 22
Federated Purchaser, Inc.
155 U.S. Route 22

TOMS RIVER

Radio & Electronic Supply Co.
Oak Ridge Shopping Center, Rt. 37

TRENTON

Allied Electric Appliance Parts, Inc.
508 Bridge St.
Almo Radio Co.
201-03 Calhoun St.
The Dragon Co.
959 Liberty St.
Jackson Distributing Co.
1900 Genessee St.
LaFayette Radio Corp.
4 Brunswick Circle
Nidisco Trenton, Inc.
985 Princeton Ave.

UNION CITY

Nidisco, Inc.
2812 Hudson Blvd.

VINELAND

Almo Radio Co.
219 Landis Ave.

WANAMASSA

Dart Electronics Mart
1027 Hiway 35

WEST ATLANTIC CITY

Almo Radio Co.
1800 Verona Ave.

WHIPPANY

State Electronics Parts Corp.
399 Route #10 at Troy Hills Rd.

ALBANY

Fort Orange Radio Distributing Co., Inc.
904-916 Broadway
Greylock Electronics Supply Co., Inc.
438 Central Ave.
E. E. Taylor Co.
465 Central Ave.

AMSTERDAM

Adirondack Radio Supply
185-191 W. Main St.

AUBURN

Dare's Radio
22 E. Genessee St.

BATAVIA

B & O Radio Equipment Corp.
5 Center St.

BAY SHORE, L. I.

Gem Electronic Supply of Bay Shore
1261 Sunrise Hwy.
Long Island Electronic Supply Corp.
981 Sunrise Highway

BELLEROSE, L. I.

Gem Electronics of Bellerose
247-40 Jericho Turnpike

BINGAMTON

Morris Electronics, Inc.
195 Water St.
Stack Electronics, Inc.
45 Washington St.
Wehle Electronics, Inc.
26 Water St.

BROOKLYN

Bay Electronic Corp.
3480 Nostrand Ave.
Electronic Equipment Co., Inc.
2912 Atlantic Ave.
Gem Electronics of Brooklyn, Inc.
59 Willoughby St.
Gem Electronics of Flatbush
485 Coney Island Ave.
Graham Electronic Distributors, Inc.
846 Manhattan Ave.
Green Tele-Radio Dist., Inc.
3701 18th Ave.
Green Tele-Radio Dist., Inc.
472 Sutter Ave.
Hy Grade Electronics, Inc.
9216 Church Ave.
Laco Electronics Co.
4924 Fourth Ave.
Mil Electronics Supply Co.
1109 Broadway
National Radio Parts Dist. Co.
572-74 Albany Ave.
Paulton Electronics Corp.
6325 New Utrecht Ave.
Saco Electronic Distributors, Inc.
641 Vanderbilt Ave.
T. V. Parts, Inc.
1910 Coney Island Ave.
Universal Components Corp.
1749 McDonald Ave.
Witmal Electronics
157 Manhattan Ave.

BRONX

Bay Electronic Distributors
1736 Jerome Ave.
Belco Distributors, Inc.
472 E. Tremont
The Cam Distributing Co.
1468 Westchester Ave.

BRONX (Cont.)

Fordham Radio Supply Co.
265 E. 149th St.
Gem Electronic Supply of Fordham
565 E. Fordham Rd.
Gem Electronics of West Bronx, Inc.
351 Grand Concourse
Haas Electronics Co.
862 Southern Blvd.
Jayso Electronics Corp.
819 E. 180th St.
LaFayette Radio Electronics Corp.
542 E. Fordham Rd.
National Radio Distributors Corp.
1165 Southern Blvd.
North Eastern Radio Dist., Inc.
5 Bedford Park Blvd.
Slate and Co.
3960 Merritt Ave.
Tri-Par Distributing Co.
1558 White Plains Rd.
Universal Components Corp.
4343 Park Ave.
Wilco Radio Distributors
383 E. 138th St.

BUFFALO

Dymac, Inc.
2329-31 Main St.
Genesee Radio and Parts Co., Inc.
2550 Delaware Ave.
Huron Electronic Supply, Inc.
324 North Oak St.
Olson Electronics of Buffalo, Inc.
711 Main St.
RCA Victor Distributing Corp.
1680 Walden Ave.
Radio Electric Products, Inc.
186 Genesee St.
Radio Equipment Corp.
147 E. Genesee St.
Radio Equipment Corp.
3240 Sheridan Drive
Standard Electronics, Inc.
1505 Main St.
Summit Distributors, Inc.
916 Main St.
Otto Ulbrich Co., Inc.
386 Main St., Dept. 15
Wehle Electronics, Inc.
354 N. Oak St.

COMMACK, L. I.

Electro Sound
Mayfair Shopping Center

CORNING

Eddy Electronics
71 Bridge St.
Rochester Radio Supply Co., Inc.
163 E. Market St.

CORONA, L. I.

Mannfred Electronics
102-09 Northern Blvd.

CORTLAND

Winchell Electronics
65-67 Clinton St.

DUNKIRK

Huron Electronic Supply Co.
33 E. Third St.

EAST NORTHPORT, L.I.

Nassau Suffolk Electronics
2066 E. Jericho Turnpike

ELMIRA

Eddy Electronics
108 W. Church St.
Iceco, Inc.
653 Madison Ave.
LeValley McLeod, Inc.
215 E. Church St.
Stack Electronics, Inc.
306 Railroad Ave.

FARMINGDALE, L.I.

Arrow Electronics, Inc.
900 Broad Hollow Rd., (Rt. 110)
Gem Electronic Distributors, Inc.
34 Hempstead Turnpike

FLUSHING, L.I.

Allen Electronics, Inc.
41-42 Main St.
Greylock Electronic Distributors
136-05 35th Ave.
Stuart Electronic Distributors, Inc.
79-12 Parsons Blvd.

FOREST HILLS, L.I.

Gem Electronics of Forest Hills, Inc.
101-10 Queens Blvd.

FREDONIA

Barker-Higbee, Inc.
27 Water St.

FULTON

Roberts & O'Brien, Inc.
9 W. First St., South

GENEVA

Rochester Radio Supply
62 Reed St.

GLENS FALLS

Ray Supply, Inc.
Upper Glen St.

GREAT NECK, L.I.

Gem Electronics of Great Neck
271 Northern Blvd.

HEMPSTEAD, L.I.

Davis Electronic Corp.
204 Main St.
Standard Parts Corp.
277 N. Franklin St.

HERKIMER

Herkimer Electronics, Inc.
221 E. Albany St.

HICKSVILLE, L.I.

Gem Electronics Distributors, Inc.
236 Broadway

HORNELL

Hornell Electronic & Motor Equipment
286 Main St.

HUDSON FALLS

Northway Electronics
114 River St.

HUNTINGTON, L.I.

Gem Electronics of Huntington, Inc.
120 W. Jericho Turnpike

HUNTINGTON STATION, L.I.

Rite Electronics, Inc.
1946 New York Ave.

ITHACA

Ithaca Electronics
415 Taughannock Blvd.

JAMAICA, L.I.

Harrison Radio Corp.
144-24 Hillside Ave.
LaFayette Radio Electronics Corp.
165-08 Liberty Ave.
Peerless Radio Dist., Inc.
92-32 Merrick Rd.

JAMESTOWN

Johnson Radio & Elec. Equipment
119 Hunt Rd.
Warren Radio, Inc.
2208 Washington St.

KINGSTON

Arace Electronic Distributors
16 Van Deusen St.
Greylock Elect. Dist.
763 Albany Ave., Ext.
Kingston Electronics
124 N. Front St.

LACKAWANNA

Crosstown Electronics, Inc.
Abbott & Ridge Roads

LINDENHURST, L.I.

Servview Electronic Supply Corp.
26-28 E. Sunrise Highway

LONG ISLAND CITY, L.I.

H. L. Dalis, Inc.
35-35 24th Street

MALONE

Ray Supply, Inc.
55 West Main Street

MASSAPEQUA, L.I.

A & P Electronics Corp.
12 Sunrise Highway

MASSENA

Seaway Electronics, Inc.
Massena-Winthrop Rd., Rt. 420, Box 121

MERRICK, L.I.

Electronics Unlimited
1732 Sunrise Highway

MIDDLETOWN

Artec Distributors
17 Cottage Street

Certified Electronics, Inc.
Certified Drive at Montgomery Rd.

MINEOLA, L.I.

Arrow Electronics, Inc.
525 Jericho Turnpike

Nassau Electronics
471 Jericho Turnpike

NEWARK

T.O.P. Distributing Co.
148 W. Union Street, Wayne County

NEWBURGH

Chief Electronics, Inc.
248 Washington Street
Randzin Electronics
Route 17K(next to Robert Hall)

NEW YORK CITY

Acme Electronics Supply, Inc.
202 E. 44th Street
Adson Radio and Electronics Company
189 Greenwich Street
Arrow Electronics, Inc.
65 Cortlandt Street
Blan, The Radio Man, Inc.
64 Dey Street
Bonafide Radio & Electronics Corp.
72 Cortlandt Street
Consolidated Radio Sales Corp.
768 Amsterdam Avenue
Dale Electronics
244 W. 14th Street
Electronic World, Inc.
1799 First Avenue
Gem Electronics of Manhattan
205 Fulton Street
Grand Central Radio, Inc.
124 East 44th
Greylock Electronics Supply Co., Inc.
550 W. 168th Street
Harlem Electronic Wholesalers, Inc.
28 West 125th Street
Harrison Radio Corporation
225 Greenwich Street
Harvey Radio Co., Inc.
103 West 43rd Street
Lafayette Radio Electronics Corporation
100 Sixth Avenue
Leonard Radio, Inc.
69 Cortlandt Street
Lion Electronics Corporation
215 Fulton Street
Midway Radio & Television Corp.
60 West 45th Street
Packard Electronic Corp.
33 Union Square West
Sylvan-Wellington Company
269 Canal Street
United Teletronics Parts Corp.
3860 - 10th Avenue
Universal Components Corp.
60 W. 15th Street

MOUNT VERNON

Gem Electronics of Mt. Vernon, Inc.
70 East Third

NIAGARA FALLS

Niagara Electronics Corp.
2601 Pine Avenue
Niagara Falls Radio Equip. Co., Inc.
1720 Pierce Avenue
Standard Electronics Lockport Corp.
718 - 9th Street

NORTH TONAWANDA

Radio Equipment Corp.
110 Webster Street

OLEAN

B. & O. Radio Equipment Corp.
1615 W. State Street
Standard Electronics Olean Corp.
504 East State Street

PATCHOGUE, L. I.

Standard Parts Corporation
235 West Main Street

PLAINVIEW

Gem Electronic Distributors, Inc.
E. Bethpage Road and Old Country Road

PLATTSBURG

Champlain Electronics
10 So. Platt Street
Ray Supply, Inc.
13 Saily Avenue

POUGHKEEPSIE

B & B Electronics Co.
535 Main Street
Chief Electronics, Inc.
14 North Bridge Street
Greylock Elect. Dist.
5 Parker Avenue

RICHMOND HILL

Anchor Electronic Dist., Inc.
116-01 101st Avenue

RIDGEWOOD

Green Tele-Radio Distributors, Inc.
67-15 Fresh Pond Road

RIVERHEAD, L.I.

D & S ELECTRONICS, INC.
302 Lincoln Street

ROCHESTER

American Electronic Supply Co.
482 St. Paul Street
Case Electronic Supply Co., Inc.
82 St. Paul Street
Masline Electronics, Inc.
511 Clinton Avenue, South
Morris Electronics of Rochester, Inc.
75-81 Stillson St.
Rochester Radio Supply Co., Inc.
140 West Main Street
Wehle Electronics, Inc.
304 Andrews Street

ROCKVILLE CENTRE, L.I.

Green Tele-Radio Dist., Inc.
172 Sunrise Highway

ROME

Rome Electronic Supply Company
108 Spring Street

SCARSDALE

Lafayette Radio Electronics Corp.
691 Central Avenue

SCHENECTADY

Adirondack Electronics, Inc.
1720 Broadway
Electric City Radio Supply
2469 Albany Street
Grimmer Electronic Parts Supply
41 N. Brandywine Ave.
Schenectady Electronics Dist. Corp.
1708 Altamont Avenue

SMITHTOWN, L.I.

Gem Electronics of St. James, Inc.
731 Jericho Turnpike

SYOSSET, L.I.

Lafayette Radio Electronics Corp.
111 Jericho Turnpike

SYRACUSE

W. E. Berndt Company
655 South Warren Street
Gordon Electronics, Inc.
935 West Genesee Street
Mace Electronics
2740 Erie Boulevard, East
Morris Electronics, Inc.
1153 West Fayette Street
Roberts & O'Brien, Inc.
839-841 Hawatha Blvd. West
Salina Electronic, Inc.
620 So. Salina Street
Stewart W. Smith, Inc.
325 East Water Street
T.O.P. Distributing Co.
519 Erie Boulevard, East

TROY

Q. & Q. Electronic Supply
666-672 River Street
Trojan Electronic Supply, Inc.
15 Middleburgh Street
Troy Television
85 Fifth Avenue

UTICA

Associated Electronics Supply
1427 Sunset Avenue
Genesee Electronics
331 Broad Street
Grapac Electronics Co.
248 Elizabeth Street
Rome Electronics, Inc.
1600 Lincoln Avenue
Vaeth Electric Company
35 Genesee Street

VALLEY STREAM, L.I.

Gem Electronics of Valley Stream, Inc.
218 Sunrise Highway

VESTAL

Federal Electronics, Inc.
Vestal Parkway

WATERTOWN

Gateway Electronics, Inc.
546 Factory Street
Watertown Electronics
531 State Street

WESTBURY, L.I.

Adelphi Electronics, Inc.,
Jericho Turnpike

WHITE PLAINS

Melville Radio Corporation
43 Hamilton Avenue
Thru-Way Electronic Distributors
241 Tarrytown Road
Westchester Electronic Supply Co., Inc.
602-610 Mamaroneck Ave.

WOODSIDE

Boro Electronics, Inc.
69-18 Roosevelt Avenue

YONKERS

Forbee's Electronics, Inc.
356 South Broadway
Gem Electronics of Yonkers
1937 Central Avenue
Yonkers Electronic Supply, Inc.
541 Nepperhan Ave.

YORKVILLE

Valley Electronic Labs, Inc.
Commercial Drive

ROSEBANK, S.I.

B & D DISTRIBUTING COMPANY
639 Tompkins Avenue

NORTH CAROLINAASHEVILLE

Freck Radio and Supply Co.
38 Biltmore Avenue
Long's Distributing Co., Inc.
260-64 Biltmore Ave.

BURLINGTON

City Radio Distributing Co.
171 N. Main Street
Womack Electric Supply Co.
315 North Church St.

CHARLOTTE

Dixie Radio Supply Company, Inc.
1431 Bryant Street
Radiotronic Distributors, Inc.
1015 N. Seigle Ave.
Southern Electronics, Inc.
919 W. Morehead Street
World Electronics, Inc.
1415 So. Tryon St.

CONCORD

MacVictor Electronic Supply, Inc.
Highway 29 & Florence Ave.

DURHAM

Vickers Electronic Supply Co., Inc.
506 E. Main Street
Womack Electronic Supply Co., Inc.
512 E. Peabody

FAYETTEVILLE

Eastern Radio Supply, Inc.
835 Bragg Blvd.
Southeastern Radio Supply Co.
of Fayetteville, Inc.
325 Rowan Street

GASTONIA

Dixie Radio Supply Company, Inc.
507 West Airline Avenue

GOLDSBORO

Marshall Electronics
Route 70 By-Pass
Womack Electronics Corp.
106 N. Carolina St.

GREENSBORO

Carolina Radio Supply Co., Inc.
838 Huffman Street
Guilford Electronic Supply
233 East Washington Street
Southeastern Radio Supply Co., Inc.
404 North Eugene Street

GREENVILLE

Womack Electronics, Inc.
311 Boyd Avenue

HICKORY

Southeastern Radio Supply Co., Inc.
907 Second Ave., N.W.
Victor Radio-TV Supply Co.
1058 3rd Avenue Drive, N.W.

HIGH POINT

Womack Radio Supply Co., Inc.
130 Lindsay Street

JACKSONVILLE

Southeastern Radio Supply Co., Inc.
513 New Bridge Street

KINSTON

Southeastern Radio Supply Co., Inc.
408 N. Heritage Street

RALEIGH

Southeastern Radio Supply Co., Inc.
414 Hillsboro Street
Womack Supply Co., Inc.
421 S. Salisbury Street

ROCKY MOUNT

Womack Electronics, Inc.
571 N. Raleigh Street

SALISBURY

Southeastern Radio Supply Co., Inc.
316 N. Depot Street

SHELEY

Freck Radio Supply Co., Inc.
402 W. Dixon Blvd.

STATESVILLE

Victor-Turner Electronic Supply, Inc.
1128 Shelton Avenue

WALKERTOWN

Peoples Electronics
Sullivantown Road

WILMINGTON

Southeastern Radio Supply Co., Inc.
1815 Dawson Street

WILSON

Southeastern Radio Supply Co., Inc.
321 S. Goldsboro Street

WINSTON-SALEM

Electronic Wholesalers, Inc.
938 Burke Street
Kirkman Electronics, Inc.
823 South Marshall Street
Womack Co., Inc.
926 Brookstown Ave.

SOUTH CAROLINAANDERSON

Dixie Radio Supply Company
512 N. Murray Avenue

CHARLESTON

Radio Laboratories
475 East Bay Street
Wholesale Radio Supply Co.
515 E. Bay Street

COLUMBIA

Dixie Radio Supply Co., Inc.
1900 Barnwell Street
Horlacher & Barrett
1740 Blanding Street
Southeastern Radio Parts Co.
1606 Gregg Street

FLORENCE

Dixie Radio Supply Co., Inc.
531 East Palmetto St.
Southern Electronics, Inc.
355-65 North Irby St.

GREENVILLE

Carolina Radio Supply Co., Inc.
221 W. Washington Street
Dixie Radio Supply Co., Inc.
500 Pendleton Street
Gilliam Radio Co.
802 Buncombe
Hemcor Electronic Supply
9 Duncan Street

GREENWOOD

Dixie Radio Supply Co.
116 Circular Street

SPARTANBURG

Dixie Radio Supply Company, Inc.
208 E. St. John
Hemcor Electronic Supply
481 Union Street

SUMTER

Dixie Radio Supply Co.
212 West Liberty Street

PENNSYLVANIA

ALLENTOWN

Federated Purchaser, Inc.
1115 Hamilton Street
Luckenbach & Johnson, Inc.
1828 Tilghman Street
Parts Unlimited Electronics Center
1369 No. 7th Street
A. A. Peters, Inc.
231 North Seventh Street
Radio Electric Service Co. of Lehigh Valley, Inc.
425 Hanover Ave.

BETHLEHEM

Buss Radio Electric Co.
431 W. Broad Street

BRISTOL

Powell Electronic Sales Co.
400 Otter Street

CARLISLE

Cumberland Electronics
810 North Hanover Street

CHESTER

A. C. RADIO SUPPLY CO.
126 E. 24th Street
Bell Radio & Television Supply Co.
1835 W. 9th Street
County Supply Company
618 Concord Ave.

CLIFTON HEIGHTS

Delaware Valley Electronic Supply Corp.
224 W. Baltimore Pike

COATESVILLE

County Supply Company
703 E. Chestnut Street

EASTON

Resco of Lehigh Valley
1700 Northampton Street

ELKINS PARK

A.G. Radio Parts Co.
939 Township Line Road

HARRISBURG

D & H Distributing Co., Inc.
2535 North 7th Street
Radio Distributing Company
915 South 13th Street

HAVERTOWN

Kass Electronics Distributors
Westchester Pike & Darby Road

HAZLETON

General Radio & Electronic Co.
800 Alter Street
Moyer Electronic Supply Co., Inc.
758 N. Locust Street

LANCASTER

George D. Barbey Co., Inc.
622 Columbia Ave.

LEBANON

George D. Barbey Co., Inc.
821 Quenton Road

LEWISTOWN

Alvo Electronics Distributors, Inc.
207 W. Market Street

NORRISTOWN

Almo Radio Company
550 Markley Street
Kratz Brothers
Kohn and Oak Streets
Phila. Electronics, Inc.
624 W. Airy Street

PHILADELPHIA

A.C. Radio Supply Co.
1539 W. Passyunk Ave.
A.G. Radio Parts Co.
17th and Venango Streets
Allied Electric Appliance Parts, Inc.
1320 W. Erie Avenue
Allied Electric Appliance Parts, Inc.
5916 Market Street
Allied Electric Appliance Parts, Inc.
5946 Germantown Ave.
Almo Radio Co.
5801 Rising Sun Ave.
Almo Radio Co.
913 Arch Street

PHILADELPHIA contd.

Almo Radio Co. of Philadelphia
7540 Frankford Ave.
Almo Radio Co. of Philadelphia
6205 Market Street
AlSCO Electronics, Inc.
2520 N. Broad Street
AlSCO Electronics, Inc.
6324 Sackett Street
Arlen Supply Company
6026-28 Market Street
Barnett Brothers Radio Co.
622 Arch Street
Eastern Television Supply
1802 S. Broad Street
Jem Electronic Distributors, Inc.
1022 W. Girard Ave.
Nat Lazar Radio Co.
4231 Lancaster Ave.
Electronic Distributors
727 Arch Street
Herman Miller & Co.
2812 Cottman Ave.
Penn Electronic Parts Co.
2446 Kensington Ave.
Penn Electronic Parts Co.
5303 Frankford Ave.
Radio Electric Service Co. of Pa., Inc.
701 Arch Street
Radio Electric Serv. Co. of Pa., Inc.
5930 Market Street
Raymond Rosen & Co.
Parkside Ave. at 51st Street
Sid Wagner's Electronic Supply
4632 N. 5th Street

POTTSTOWN

George D. Barbey and Company, Inc.
157 North York Street

POTTSVILLE

Luckenbach, Inc.
1907 Elk Ave.
Moyer Electronic Supply Co., Inc.
330 E. Norwegian St.

READING

A.G. Radio Parts Co.
628 Schuylkill Ave.
George D. Barbey Co., Inc.
333 North 4th Street

SCRANTON

General Radio and Refrig. Company
1129 Wyoming Ave.
Fred P. Pursell Co.
1221-27 N. Washington Ave.

SUNBURY

Moyer Electronic Supply Company, Inc.
310 North 2nd Street

UPPER DARBY

AlSCO Electronics, Inc.
239 Fairfield Ave.

WARMINSTER

Allied Electric Appliance Parts, Inc.
301 North York Road

WILKES-BARRE

General Radio & Electronic Company
396 S. Main Street
Radio Service Company
346 South Main St.
Shelborne Electronics
169 N. Pennsylvania Ave.

WILLIAMSPORT

Alvo Electronics Dist., Inc.
123 E. Fourth Street
General Radio & Electronic Co.
232 William Street
Williamsport Radio Supply, Inc.
518 West 3rd Street

WILLOW GROVE

AlSCO Electronics, Inc.
York Road and Lincoln Ave.
Radio Electric Service Co. of Penna., Inc.
29 York Road

YORK

J.R.S. Distributors
646 W. Market Street
Rosen Electronics Co.
129 S. George St.
Wholesale Radio Parts Co., Inc.
1650 Whiteford Road
York TV Supply Co.
1880 W. Market Street

TENNESSEEATHENS

Curle-Reeves, Inc.
1308 Georgia Ave.

BRISTOL

Clark Radio Supply
620 Broad Street
McClung Appliances
611 Haynes Street
Roden Electrical Supply Company
101 3rd Street

CHATTANOOGA

Curle Radio Supply Co.
439 Broad Street
Specialty Dist. Co.
1313 Central Ave.

CLARKSVILLE

Randolph, Hale & Matthews, Inc.
507 North First St.

COLUMBIA

Randolph and Williams, Inc.
208 W. 4th Street

COOKEVILLE

Randolph & Parks
2nd and Oak Streets

JOHNSON CITY

Chemcity Radio and Electric Co.
808 Buffalo Street

KINGSPORT

Chemcity Radio and Electric Co.
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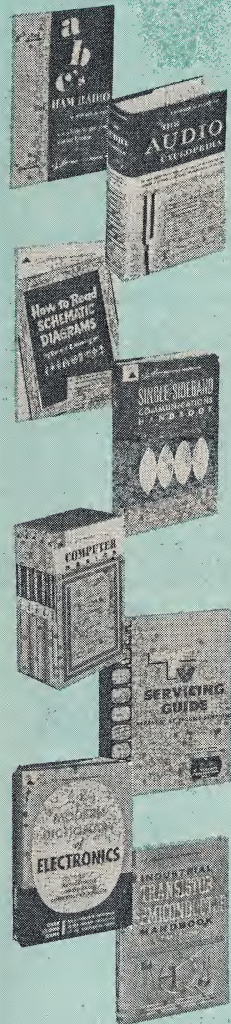
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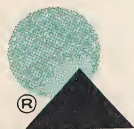
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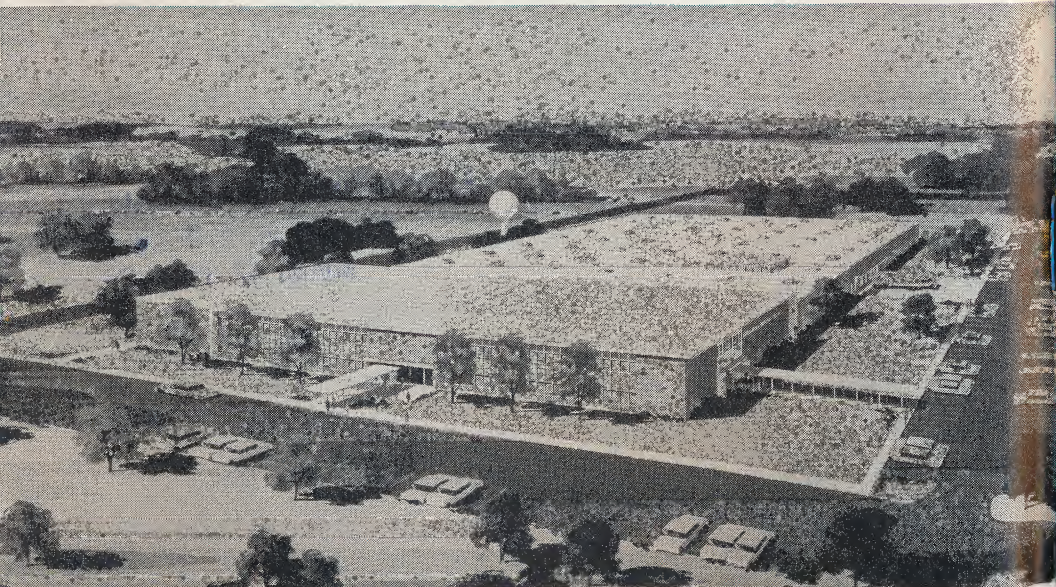
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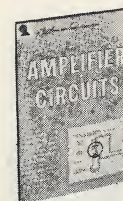
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by William F. Mullin. Designed to take the misinformation and "mystery" out of capacitors. Written in everyday language anyone can understand, it explains the principles of capacitor operation, describes the physical make-up and construction of various types, and tells where different types are most often used, and why. It discusses the points to consider in selecting suitable replacements, and includes practical information on how to test capacitors for opens, leakage, shorts, value, power factor, etc., and how to measure their values. Bridges the gap between engineering technology and circuit theory, providing a truly practical book for technicians, servicemen, and students.

CHAPTER CONTENTS: 1. What is a Capacitor 2. Capacitor Theory 3. Capacitor Construction 4. Capacitor Application 5. Capacitor Replacement 6. Capacitor Testing

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Electronic Organ Handbook

by H. Emerson Anderson. Tells how electronic organs work, including operating principles, theory, circuit diagrams, troubleshooting information, tuning instructions, and maintenance procedures. Individual chapters contain descriptions and specifications of specific organ models. For all who have an interest in organs — owners, potential owners, and technicians who desire to expand their servicing activities. Includes a Glossary of organ terms.

CHAPTER CONTENTS: 1. How Electronic Organs Work 2. The Baldwin Electronic Organ 3. The Conn Electronic Organ 4. The Gulbransen Transistor Organ 5. The Hammond Organ 6. The Kinsman Electronic Organ 7. The Lowrey Electronic Organ 8. The Thomas Electronic Organ 9. The Wurlitzer Model 4000 Chord Organ 10. Leslie Organ Speakers 11. Electronic Organ Tuning Devices

272 pp.; 5½" x 8½". No. EOA-1 \$4.95

Marine Electronics Handbook

by Leo G. Sands. Tells how to select, use, install, and maintain all the various types of electronic equipment in use on both large and small marine craft. Includes operating procedures and regulations for marine-electronic gear. Ideal for boat owners and technicians.

CHAPTER CONTENTS: 1. Ship-to-Shore Radio 2. MF Radiotelephones 3. VHF-UHF Radiotelephones 4. Sound Systems 5. Radio Direction Finders 6. Depth Sounders 7. Steering Devices 8. Marine Radar 9. Electrical Power 10. Rules and Courtesy

264 pp.; 5½" x 8½". No. MES-1 \$3.95

Modern Infrared Technology

by Barron Kemp. Infrared energy—that natural energy which radiates from every object — has rapidly grown in importance because of increased scientific experimentation and technological developments during the last few years. This authoritative reference volume explains the principles and applications of infrared energy in spectroscopy and spectrophotometry, temperature measurement, surveillance and detection, solid-state physics, telescopic, etc. Included are discussions of the countless new uses, and some

of the infinite number of possible applications, for infrared energy. Written for technicians, engineers, students, and others who want to broaden their knowledge of the infrared field, this book provides extremely comprehensive coverage of the subject. The various principles of infrared instrumentation are clearly described and illustrated, including the construction, mounting, and use of visual and infrared lamps, as well as detectors and amplifiers.

CHAPTER CONTENTS: 1. Infrared — Hot But Not Heat 2. Sources of Radiant Energy 3. Infrared Detectors 4. Infrared Imaging Devices 5. Optics for Infrared Systems 6. Remote Temperature Measurement 7. Spectroscopy and Spectrophotometry 8. Other Infrared Devices

256 pp.; 5½" x 8½". No. INF-1 \$4.95

Handbook of Electronic Circuits

by the RCA Service Company, Inc. Analyzes the operation of 61 electronics circuits. Included for each circuit are a schematic and a component failure analysis, which describes possible troubles if particular components fail. Of real value to service technicians, engineers, etc.

CHAPTER CONTENTS: 1. Four Power Supplies 2. Fourteen Receiver Circuits 3. Eight Transmitter Circuits 4. Two Limiter Circuits 5. Three FM Detector Circuits 6. Twenty-four Radar-Television Circuits 7. Four Filter Circuits 8. Two Control Circuits

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ABC's of Missile Guidance

by Ray Schapiro. An entertaining, easy-to-understand book on the modern principles used to guide missiles and satellites. Tells all about the fundamental principles, how they were developed, and missile propulsion techniques. Includes discussions of preset, command, beam-rider and homing guidance systems.

CHAPTER CONTENTS: 1. The Development of Rockets and Missiles 2. Propulsion 3. Fundamentals of Guidance 4. Preset Guidance Systems 5. Command Guidance and Beam-Rider Systems 6. Homing Guidance Systems 7. Satellite Technology

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Handbook of Electronic Tables and Formulas (2nd Edition)

Completely revised, updated and expanded to contain nearly 50% more material than the popular first edition. Truly a one-stop reference for all charts, tables, formulas, laws, symbols and standards used throughout the electronics industry. 6 FULL-COLOR foldout pages show assignments for the entire frequency spectrum, based on the latest FCC allocations.

CHAPTER CONTENTS: 1. Electronics Formulas and Laws 2. Constants and Standards 3. Symbols and Codes 4. Service and Installation Data 5. Design Data 6. Mathematical Tables and Formulas 7. Miscellaneous Data
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Air-Conditioning Installation and Maintenance

by Ernest Tricomi. Completely covers the theory and operation of air-conditioning systems. Includes detailed explanations of all air-conditioner components, their purposes, and how they work. Provides helpful data on automobile air-conditioners, installation kits, testing, central air-conditioning systems, maintenance tips, troubleshooting, winterizing and storage, etc. Truly a working handbook as well as a reference.

CHAPTER CONTENTS: 1. General Description of Air-Conditioners 2. Theory and Operation 3. Installation Kits 4. Automobile Air-Conditioning 5. Central Air-Conditioning Systems 6. Tools and Test Equipment 7. Air-Conditioning Repairs 8. Inspection and Pre-Season Preparation 9. Winterizing and Storage 10. Parts Procurement

160 pp.; 5½" x 8½". No. ACM-1 \$2.95

Eliminating Man-Made Interference

by Jack Darr. Covers the entire field of man-made interference—what it is, how it's transmitted, how it originates, tracking it to a source, and how to eliminate or minimize its effects in home radios and TV's, audio amplifiers, two-way mobile-radio systems, auto, aircraft and marine radios, electromechanical apparatus, geophysical equipment, etc. Includes two chapters of actual case histories

of unusual noise and interference problems, plus many photos of TV picture interference.

CHAPTER CONTENTS: 1. Introduction 2. Noise and its Elimination 3. Noise-Filter Design 4. Locating Interference 5. Small AC Motors 6. Case Histories 7. Automobile Radios 8. Two-Way Mobile-Radio Systems 9. Aircraft Radio 10. Marine Radio 11. Unusual Noise and Interference 12. The FCC and its Role in Interference Complaints

160 pp.; 5½" x 8½". No. MMD-1 \$2.95

ABC's of Ultrasonics

by Alan Andrews. An over-all look at ultrasonics—the science of putting sound to work. Explains what ultrasonics is, what it can do, and the equipment used. Assumes no prior knowledge of electronics. Discusses the frequency range of ultrasonics, terminology, the two types of wave behavior (cavitation and echo ranging), plus applications such as cleaning, degassing, thickness and distance measurement, testing, machining, welding, and soldering. The FCC regulations pertaining to ultrasonics are fully explained.

CHAPTER CONTENTS: 1. Introduction to Ultrasonics 2. Ultrasonic Waves 3. Transducers 4. Electronic Circuitry 5. Cavitation Applications 6. Tests and Measurements 7. Miscellaneous Applications

96 pp.; 5½" x 8½". No. ULT-1 \$1.95

ABC's of Radar

by Alan Andrews. A simple yet comprehensive explanation of the fundamentals of radar, which assumes no prior knowledge of the subject on the part of the reader. Provides basic information on transmitter-receiver theory and operation to users of radar, potential users, students, and operating and maintenance technicians. Can be used as part of a study program in preparation for the FCC Radar Endorsement Exam. Representative radar systems are covered, so that the fundamentals can be applied to any radar system.

CHAPTER CONTENTS: 1. How Radar Works 2. Radar Systems 3. Microwaves 4. Microwave Oscillators 5. Timers and Modulators 6. Antenna Systems 7. Radar Receivers 8. Indicators

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How to Read Schematic Diagrams

by Donald E. Herrington. Schematic diagrams represent the road maps of electronics. Anyone interested in any phase of electronics must know how to recognize and interpret them. This new book shows all types of schematic symbols and diagrams (including tubes, transistors, resistors, capacitors, microphones, etc.), and discusses the many methods used to indicate circuit connections, common ground points, etc. All explanations are accompanied by illustrations, and take the reader from the simplest symbols through a complete schematic. Variations in both symbols and designations are fully treated. This book is especially helpful for beginners and students of electronics.

CHAPTER CONTENTS: 1. Types of Diagrams 2. Resistors 3. Capacitors 4. Coils and Transformers 5. Electron Tubes 6. Semiconductors 7. Switches and Relays 8. Miscellaneous Components 9. Connecting the Components 10. Reading and Interpreting Schematic Diagrams.

128 pp.; 5½" x 8½". No. RSD-1 \$1.50

ABC's of Radionavigation

by Allan Lytel. Navigation by dead reckoning alone has been made obsolete by today's crowded air lanes and waterways. Increased traffic plus higher speeds demand navigational techniques involving the use of a number of complex electronic units. This book fully discusses the use and operation of electronic radionavigation equipment designed for small planes and boats, as well as for larger commercial craft. Including equipment from the relatively familiar two-way radio to the more complex-traffic control systems, the author has presented the subject in a style which can be easily understood by anyone. Helpful to technicians in learning the fundamental principles of circuit operation, and to owners or operators of boats and planes in achieving a better understanding of their navigation equipment and how to use it.

CHAPTER CONTENTS: 1. Electronic Navigation 2. Radar 3. Loran 4. Consolan, Decca and Gee 5. Direction Finders 6. Radio Ranges 7. Instrument Landing Systems

96 pp.; 5½" x 8½". No. ARN-1 \$1.95

Handbook of Electronic Charts and Nomographs

by Allan Lytel. This unique time-saver contains 58 electronic charts and nomographs which will help engineers and technicians derive answers to literally hundreds of electronic formulas with slide-rule accuracy—in no more time than it takes to rule a line. All charts and nomographs are positioned one on a page, and on one side only. The back-up side of each preceding page tells, by examples, how to use each nomograph. A clear vinyl overlay sheet is hinged from the bottom of the back cover so it can be positioned over any nomograph, permitting the user to rule in erasable pencil lines to connect the appropriate points on the graph scales. Comb-bound at the top, the book lies flat when open, and its 8½" x 11" size provides large scales for maximum accuracy. Tells how to effectively use nomographs, and how to develop them.

128 pp.; 8½" x 11". No. NOM-1 \$4.95

Electronics Math Simplified

by Alan Andrews. For the engineer, student, or technician who requires a knowledge of mathematics as it pertains to electronics. Covers the subject in a logical, clear, and concise manner, using dozens of examples related specifically to electronics. Particularly suited for use as a textbook in any school or other training program involving the study of electronics, the book has been especially prepared to coincide with studies leading to 2nd- and 1st-class FCC Radiotelephone licenses.

CHAPTER CONTENTS: 1. Some Fundamental Ideas 2. Scientific Notation 3. Basic Algebra 4. Logarithms 5. Basic Trigonometry 6. Units of Measurement 7. Ohm's Law 8. Resistance 9. Alternating Current 10. Frequency 11. Inductance 12. Capacitance 13. AC Circuits 14. Resonance 15. Tubes and Amplifiers 16. Power Supplies 17. Meters 18. Modulation 19. Antennas 20. Binary Numbers (3 Appendices: Natural Trigonometric Functions; Common Logarithms; Answers to Problems)

224 pp.; 5½" x 8½". No. MAT-1 \$4.95

How To Repair Small Appliances

by Jack Darr. "The majority of household appliances are relatively simple," says author Darr, "consisting of nothing more than a heating element, thermostat, and perhaps a small electric motor." Through a combination of photos, diagrams, and step-by-step disassembly and assembly instructions, this book analyzes the construction and operation of 15 everyday home appliances, describes their most common defects, and shows how to fix them.

CHAPTER CONTENTS: 1. Appliance Construction and Operation (Toasters; Shavers; Irons; Knife Sharpeners; Mixers; Blenders; Coffee Makers; Popcorn Poppers; Skillets; Sewing Machine Foot Controls; Blankets; Heating Pads; Fans; Can Openers, Rotisseries) 2. Line Cords, Plugs, and Attachments (Types of Cords Used; Wire Sizes; Plugs; Checking Line Cords for Wear and Aging; Cord Attachments and Strain Reliefs; Appliance Connectors; Fasteners and Wire Nuts) 3. Heating Elements and Thermostats (Controlling the Heat; Testing and Repairing Heating Elements) 4. Small Electric Motors (Troubles in Brush Motors; Bearings; Cleaning a Motor; Controllable-Speed Motors; Safety Precautions) 5. Appliance Servicing as a Business (Time-Saving Tools; Parts Procurement). 128 pp.; 5½" x 8½". No. APP-1 \$2.50

ABC's of Magnetism

by Barron Kemp. Completely takes the mystery out of magnetism. Fully covers the subject in an easy-to-understand style, starting with the discovery of magnetic force, and progressing through the latest applications of magnetic devices. Special emphasis is placed on the basic principles of magnetism and the fundamentals and uses of electromagnets. A special feature of the book is its illustrative content, with many unusually expository drawings, photographs, and diagrams which will help you better understand this natural force.

CHAPTER CONTENTS: 1. Magnetism 2. Magnetic Theory 3. Magnetic Field 4. Magnetic Material 5. Permanent Magnetism 6. Electromagnetism 7. Magnetic Inductance 8. Applications of Magnetism 96 pp.; 5½" x 8½". No. AOM-1 \$1.95

Fundamentals of Magnetic Amplifiers

by Barron Kemp. A complete coverage of the design, operation, testing, and application of saturable-core reactors and magnetic amplifiers. Magnetic amplifiers, useful over wide ranges of temperature and humidity with low power consumption and great versatility, are replacing tubes in many circuits and devices; missile equipment, computers, industrial control systems, laboratory instruments, and a number of other applications. Written to fill the need for a practical and easily-understandable text, technicians, engineers, students, and experimenters who work with saturable-core devices will find this book invaluable. Covering the theory and operation of magnetic amplifier devices, it begins with a discussion of basic reactors and reactor core materials. Using a "building-block" approach, succeeding chapters go into greater detail on applications and testing.

CHAPTER CONTENTS: 1. Magnetic Amplifiers 2. The Reactor Core 3. Rectifiers 4. How The Magnetic Amplifier Is Designed 5. Testing Magnetic Amplifiers 6. Applications 128 pp.; 5½" x 8½". No. FMA-1 \$2.95

ABC's of Radiotelephony

by Leo G. Sands. Describes the applications of radiotelephony and the basic principles employed in transmitting and receiving audible signals via radio. Written principally for those who have had no professional experience with radiotelephony, the content will be useful to radio amateurs, Citizens radio enthusiasts, hobbyists, science students, and radio-TV service technicians interested in learning the fundamentals of radio-communications systems. The subject is covered from the simplest forms of intelligence-transmission devices to modern single-sideband techniques. Includes descriptions and explanations of AM, FM, and SSB transmitters and receivers, as well as various means for radiating and intercepting radiotelephone signals.

CHAPTER CONTENTS: 1. Basic Principles 2. Carrier Signal Generation 3. Signal Modulation 4. Carrier Radiation 5. Carrier Reception and Demodulation 6. Radiotelephone Systems 96 pp.; 5½" x 8½". No. ABT-1 \$1.95

Industrial Electronics Measurement & Control

by Edward Bukstein. Describes the most common techniques being presently employed in the field of industrial measurement and control. The book is divided into two parts. The first, consisting of nine chapters, covers measurement techniques. The second part, on control techniques, includes six chapters; an additional chapter covers controls for flame failure, elevator leveling, tension pumps and electrostatic precipitation. Components, circuits, and applications are described and explained in sufficient detail to permit the reader to service and maintain industrial electronic apparatus. This book is unique in that all techniques of a similar nature — for example, temperature measurement, whether employing phototubes, resistors, thermocouples, or resistance thermometers — are conveniently included in one chapter. Adds immeasurably to the book's usefulness for both reference and self-study purposes, as well as for classroom use.

CHAPTER CONTENTS: 1. Pressure 2. Illumination and Color 3. Temperature 4. Humidity, Moisture, and Liquid Level 5. Counting Devices 6. Time and Speed 7. Frequency 8. Dimension 9. Flow Rate 10. Time Delay 11. Temperature Control 12. Motor Control 13. Welding-Current Control 14. Positioning Controls 15. Illumination Control 16. Miscellaneous Controls (Two Appendices: Industrial Tubes; Glossary) 192 pp.; 5½" x 8½". No. IND-1 \$3.95

ABC's of Synchros and Servos

by Alan Andrews. Behind most of today's push buttons and remote controls lies a servomechanism (servo) consisting of a number of electrical, electronic, and mechanical components and devices interconnected to achieve specific results. Synchros are motor-type devices used extensively as integral parts of servomechanism systems. In this age of automation, servos are found in a variety of mechanisms, ranging from remote-controlled TV tuners to missile guidance control systems. This book explains the fundamentals of servos on a level easily understood by students, hobbyists, and technicians. Beginning with block-diagram discussions and drawings to explain

Electric Motor & Generator Repair

by L. Donald Payne. An all-in-one volume covering operating principles as well as maintenance and repair for all types of electric motors and generators. Completely analyzes the various components and their functions, explaining the differences in design and capabilities. Includes detailed information on both AC and DC single- and multi-phase equipment. Describes tests and measurements, maintenance and repair, with special emphasis on winding and rewinding procedures, the data most needed by technicians, engineers, experimenters, hobbyists, and students.

CHAPTER CONTENTS: 1. General Discussion 2. Introduction to AC Motors 3. Split-Phase Induction Motors 4. Capacitor Motors 5. Repulsion-Induction and Shaded-Pole Motors 6. Universal Motors 7. Polyphase Motors 8. DC Armatures 9. DC Motors 10. Generators.

256 p.; 5½" x 8½". No. MGR-1 \$4.95

(Will be available in October, 1962)

the fundamentals of servo systems, the book logically progresses to descriptions and operating principles of position transducers, synchros, servo amplifiers, magnetic amplifiers and servomotors, concluding with an analysis of complete systems.

CHAPTER CONTENTS: 1. Individual Control Systems 2. Position Transducers 3. Synchros 4. Modulators and Demodulators 5. Servo Amplifiers 6. Magnetic and Rotary Amplifiers 7. Actuators 8. Analysis of Complete Systems.

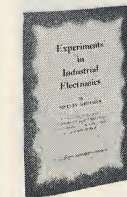
96 pp.; 5½" x 8½". No. ASE-1 \$1.95

Experiments in Industrial Electronics

by Melvin Whitmer. A step-by-step introduction to industrial electronics. You learn about this mushrooming field by actually building typical industrial-electronics devices. Includes schematics, chassis layouts, photos, and parts lists for each project.

CHAPTER CONTENTS: 1. Introduction to Industrial Electronics 2. Photoelectric Controls 3. Electronic Timers 4. Electronic Heating 5. Measurement Transducers 6. Proximity Detector 7. DC Motor Controls 8. Servo Systems

96 pp.; 5½" x 8½". No. IEW-1 \$1.95



Howard W. Sams Pocket Dictionary of Computer Terms

by the Howard W. Sams Technical Staff. The rapid growth of computer technology has been responsible for a series of specialized vocabularies — jargons which must be universally understood for uniform work and research. This new book offers, in a compact and convenient-sized volume, over 850 authoritative and up-to-date definitions for terms, words, abbreviations, and phrases used in computer technology. Included are terms for all types of general- and special-purpose computers — analog, digital, and hybrid. Contains acronyms, phrases, abbreviations, etc., relating to coding and programming systems; acoustic, magnetic, mechanical, and electrical memory systems; logic and notation systems; and various electronic circuit categories. Students, programmers, technicians, engineers, executives, and others will find this dictionary an invaluable reference source.

96 p.; 4 1/4" x 6 1/2". No. DCT-1 \$1.50

Understanding Transformers and Coils

by Edward Bukstein. Defines the properties of inductance, tells how it is measured, and describes its applications in electronics circuitry. Thoroughly explains inductance theory, including the concepts of energy storage, counter EMF, time constant, self inductance, mutual inductance, parallel and series inductors, inductive reactance, phase relationships, impedance, energy losses, and Q. Inductor construction is also described, in terms of its effects on frequency response, core saturation, shielding, distributed capacitance, and variable inductance. Applications of coils and transformers are given extensive coverage, including descriptions of various types of filters, chokes, peaking coils, and phase-controlling devices. A chapter covering measurement and testing is included, as is a comprehensive Glossary and color-code guide.

CHAPTER CONTENTS: 1. Inductance 2. Theory 3. Construction 4. Applications 5. Transformers 6. Testing Inductors and Transformers Glossary. Transformer Color Codes.

96 pp.; 5 1/2" x 8 1/2". No. TAC-1 \$1.95

ABC's of Electronics

by Earl J. Waters. A major breakthrough in explaining basic electronics principles! The secret is in the use of simple analogies, relating fundamental principles to everyday concepts familiar to everyone. This is not just a "surface" coverage, but a comprehensive treatment which goes into electrical principles, magnetic forces and their relationship to electronics, electron theory, electronic components and how they work, and actual operation.

CHAPTER CONTENTS: 1. The Electron—A Very Small Workman 2. Electricity and Magnetism—Partners In Electronics 3. Electrical Resistance—A Road Block For Electrons 4. Electrical Capacitance—A Storehouse of Electrons 5. Electrical Inductance—An Opposition to Any Change. 6. Alternating Current—A Two-Way Street for Electrons 7. Circuit Impedance—A Combined Opposition 8. Electromagnetic Radiation—Into Thin Air 9. The Vacuum Tube—An Electronic Valve 10. The Transistor—A Miniature Giant 11. The Production of Radio Waves—The Connecting Link.

96 pages; 5 1/2" x 8 1/2". No. ELW-1 \$1.95

Servicing Electronic Organs

by Carl Pittman & Eugene Oliver. A practical guide for technicians who are now, or who plan on, servicing electronic organs. Shows how oscillators, switches, waveshaping networks, and audio amplifiers, used individually and in combination, produce the variety of organ tones and sound effects. Explains the operation of basic circuits, along with maintenance and adjustment techniques for all major electronic organs. Detailed discussions cover the operation and servicing of tone and pedal generators; sustain, vibrato, and tremolo oscillators; key switches; percussion, voicing, and amplifier circuits; power supplies; and accessories. Includes circuit diagrams, drawings, and photographs of typical modern organs.

CHAPTER CONTENTS: 1. Introduction (musical terms and basic organ circuits) 2. Tone Generators 3. Pedal Generators 4. Pedal Sustain 5. Vibrato and Tremolo 6. Key Switches 7. Percussion 8. Sustain 9. Voicing 9. Amplifiers and Power Supplies 10. Accessories

198 pp.; 5 1/2" x 8 1/2". No. ORG-1 \$4.95

Modern Communications Course

by Edward M. Noll. With the increased use of radiocommunications systems, there is a growing demand for technicians who understand the function and operation of transmitting and receiving equipment, and who can operate and maintain this type of gear. Here, for the first time, is an up-to-date authoritative course in textbook form, devoted entirely to the subject of radiocommunications systems. Especially planned to serve as a self-study guide or classroom text on all phases of radiocommunications, this new series has been prepared as a complete course on all forms of AM and FM radiocommunications, encompassing circuit design and operation, as well as principles and practices of radio frequency transmission and reception. Containing practical experiments and projects for reinforced learning, it will also serve as a primary text for advanced students of basic electronics, and an accurate reference for active technicians and engineers. The content is particularly suitable for studies leading to careers requiring FCC Radiotelephone licensing.

Vol. 1—Radio-Frequency Systems

CHAPTER CONTENTS: 1. Fundamentals 2. The Class-C Amplifier 3. Oscillators 4. Exciters and Frequency Multipliers 5. Power Amplifiers 6. Antennas and Lines 7. Antenna Matching and Tuning Systems 8. Transistor RF Circuits.

264 pp.; 5 1/2" x 8 1/2". No. MCN-1 \$4.95

Vol. 2—AM Modulation Systems

CHAPTER CONTENTS: 1. AM Transmission Principles 2. Audio Systems and Modulators 3. Test Equipment and Adjustments 4. AM Modulation Methods 5. Transistor Modulators

and Modulation Methods

272 pp.; 5 1/2" x 8 1/2". No. MCN-2 \$4.95
(Will be available in October, 1962)

Vol. 3—FM & Pulse Modulation Systems

CHAPTER CONTENTS: 1. FM Transmission Principles 2. FM Modulation Methods 3. FM Tests & Measurements 4. FM Communications Systems 5. UHF & Microwave Circuits 6. Multiplex Transmission & Pulse Modulation 7. Radio Relay Systems 8. Space Communications

232 pp.; 5 1/2" x 8 1/2". No. MCN-3 \$4.95
(Will be available in January, 1963)

Single-Sideband Communications Handbook

by Harry D. Hooton. Because of its advantages in minimizing bandwidth requirements and making better utilization of available power, single-sideband transmission techniques portend to revolutionize communications. Here's the first truly comprehensive and authoritative book on the subject — written for amateur radio enthusiasts, communications technicians and engineers, and anyone interested in communications technology. Contains much information previously unavailable, including many circuit designs still in the laboratory stages and others developed in part by the author himself. Includes numerous foldout schematic sections for easy reference to circuit diagrams.

CHAPTER CONTENTS: 1. The Origin of Single Sideband 2. The Derivation of Single-Sideband Signals 3. Carrier Suppression Techniques 4. Sideband Selection 5. Carrier Generators 6. Speech Amplifiers and Filters 7. Single-Sideband Generators 8. Balanced Mixers and Frequency Converters 9. Low Power

Transmitters 10. RF Linear Power Amplifiers 11. Single-Sideband Receivers 12. Tests and Measurements 13. Future Trends

• 322 pp.; 5 1/2" x 8 1/2". No. SIH-1 \$6.95

Two-Way Mobile Radio Maintenance by Jack Darr. The first practical guidebook on two-way radio maintenance and installation. A real field-servicing guide on planning, installing, and maintaining all types of two-way mobile-radio systems. You'll enjoy the "nuts and bolts" treatment—from the author's own first-hand experience—that gets right to the heart of how to do the job the best and quickest way. Includes many charts to enable the reader to make necessary calculations without the use of math. Profusely illustrated with on-the-job photos of two-way installation and maintenance.

CHAPTER CONTENTS: 1. Planning a Two-Way Radio Installation 2. Receivers 3. Transmitters 4. Remote Controls 5. Towers 6. Mobile Installations 7. Noise Elimination 8. Test Equipment 9. FCC Tests and Measurements

256 pp.; 5 1/2" x 8 1/2". No. TWD-1 \$4.95

Citizens Band Radio Handbook

by David E. Hicks. A practical guide telling how to choose CB equipment, and how to obtain a license. It completely discusses the Citizens Radio Service, CB equipment and their circuits, antenna systems, fixed and mobile station installations, maintenance and repairs (including preventive maintenance), servicing adjustments and measurements for both receivers and transmitters, and operating procedures. A comprehensive Glossary fully acquaints the reader with CB terminology, and an extensive Appendix contains latest FCC Citizens Band Rules and Regulations, which all CB licensees must have on hand. Invaluable for prospective owners, as well as for technicians who install and service CB gear.

CHAPTER CONTENTS: 1. The Citizens Radio Service 2. Citizens Band Equipment 3. Receiver and Transmitter Circuitry 4. Antenna Systems 5. Station Installation 6. Maintenance and Repairs 7. Servicing Adjustments and Measurements 8. Operating Procedure. 192 pp.; 5½" x 8½". No. CBH-1 \$2.95

Citizens Band Radio Manuals

by the Howard W. Sams Engineering Staff. Famous Standard Notation Schematics and PHOTOFACT® Folders on popular-brand Citizens band transceiver models are contained in these manuals. Each volume includes a text section.

VOL. 1—Covers 46 models; includes invaluable editorial section on servicing CB equipment.

CONTENTS: Apeldo; Globe; Hallcrafters; Lafayette; RCA; Raytheon; Regency; Vocaline; CitiFone; Gonset; Heath; Morrow; Radson; Realistic; United Scientific Labs; Viking.

160 pp.; 8½" x 11". No. CB-1 \$2.95

VOL. 2—Covers 30 recent Citizens band transceiver models; includes editorial section discussing classes and types of CB equipment.

BRANDS COVERED: Arkey; Bendix; DeWald; DUO COM; Eico; Globe; Heath; Johnson; Lafayette; Morrow; Osborne; POLY COM; RCA; Sonar; Sonarcom; Spokesman; Utica; Vocaline; Webster.

160 pp.; 8½" x 11". No. CB-2 \$2.95

Second-Class Radiotelephone License Handbook (Revised)

by Edward M. Noll. Provides all the information needed to pass the 2nd-class FCC radiotelephone license examination, including recent amendments to the Communications Act, plus over 50 new questions and answers based on the latest FCC Supplement. In addition, it describes the duties and responsibilities of the license holder so he can efficiently maintain and operate two-way radio equipment after receiving his license. Six chapters of questions and answers cover Elements I, II, and III, which must be passed before a 2nd-class radiotelephone license can be obtained. Over 700 questions, based on the FCC exam, are arranged to allow the reader to progress logically from topic to topic, whether studying in the classroom or at home. Six additional chapters contain related text to provide the thorough background and comprehensive knowledge of communications theory and practices needed to fully understand the subject. A thorough study of the 12 chapters in this book will not only allow the newcomer to pass the FCC examination, but will also help the practicing license holder to more efficiently maintain and operate two-way mobile equipment on the job.

CHAPTER CONTENTS: 1. Communications Radio Systems 2. Transmission Characteristics 3. Two-Way Radio Services 4. Station License and Procedures 5. Test Equipment and Methods 6. Transmitter Tuning and Adjustment 7. Elements I and II—Basic Law and Operating Practices 8. Element III—Electronic Terms and Principles 9. Element III—Tubes and Transistors 10. Element III—Power Sources 11. Element III—Transmitters and Antennas 12. Receivers, Measurements, and Regulations (Seven Appendices: Definitions of Station Assignments from FCC "Rules and Regulations"; Land, Aviation, and Marine Two-Way Radio Assignments; Extracts From the Communications Act of 1934, as Amended; Extracts from the International Radio Regulations; Extracts from the FCC "Rules and Regulations"; Recent Amendments to the Communications Act; New Supplemental Questions & Answers. 256 pp.; 5½" x 8½". No. QAN-1 \$3.95

First-Class Radiotelephone License Handbook

by Edward M. Noll. Provides all the information the reader needs to progress from a 2nd to a 1st class FCC Radiotelephone license holder. In addition, it serves as an excellent reference handbook for those who have already obtained their 1st class license. While containing 291 questions and answers based on Element IV of the FCC Exam, this volume is far more than just a question-and-answer book. Rather, it is a comprehensive textbook on broadcast communications. Memorizing answers to typical questions is sometimes enough to pass an FCC exam, but a thorough understanding of the theory and basic principles involved is necessary to hold a responsible position as a communications engineer.

CHAPTER CONTENTS: 1. Frequency Assignments 2. Duties and License Requirements 3. Broadcast Microphones 4. Record and Tape Machines 5. Studio and Control-Room Facilities 6. Remote Facilities 7. AM Broadcast Transmitters, Antennas, and Lines 8. FM Transmitters 9. Transmitter Monitor and Test Equipment 10. Proof-of-Performance Measurements 11. Television Broadcasting 12. Audio and Power Circuits 13. Transmitters and Antennas 14. Laws and Test Procedures 15. TV and FM Broadcasting. (Two Appendices: Extracts from the FCC "Rules and Regulations"; "Standards of Good Engineering Practice") 304 pp.; 5½" x 8½". No. BON-1 \$4.95

ABC's of Mobile Radio

by Richard Martin. With the continued increased use of two-way radio hookups, the need for a book in which two-way mobile communications and the operation and maintenance of equipment is explained simply, yet thoroughly, has grown more apparent. Written for technicians who are now servicing, or plan to service, two-way radio equipment, as well as for owners and operators, this volume provides a complete introduction to the subject. Beginning with an explanation of two-way radio communications systems and their applications, and followed by easy-to-understand descriptions of transmitter and receiver design and operation, this book will be of value to

anyone desiring knowledge of two-way mobile-radio systems.

CHAPTER CONTENTS: 1. Two-way Radio Communications, How FM Two-Way Radio Operates and Remote Control and Power Cabling 2. The Transmitter, Frequency and Phase Modulation, Block Diagram Analysis, Operational Analysis, and Analysis of a Typical FM Transmitter 3. The FM Communications Receiver, RF Amplifiers, Receiver Oscillators, The Mixer, the IF Amplifier, the Limiter, the FM Discriminator, COMCO 400-R-E Receiver 4. Power Supplies and Interconnecting, the COMCO 400-5DH Power Supply, AEROTRON "600" Series Power Supply, and Interconnecting 5. Antennas 96 pp.; 5½" x 8½". No. AMR-1 \$1.95

Servicing Transistorized Two-Way Radio

by Patrick M. Craney. This first book devoted entirely to the understanding and servicing of transistorized two-way radio equipment has been specifically written with the two-way radio technician in mind. Using only an introductory chapter to review pertinent transistor fundamentals, the author gets right to his main subject—describing the latest transistorized two-way circuits and how they work. Provides detailed information on alignment and troubleshooting procedures, as well as how to make invaluable stage-gain measurements and other helpful steps to quicker and more profitable servicing. A special feature is the chapter on tone-coded squelch systems, explaining the new resonant-relay devices which are fast becoming standard in selective-calling equipment.

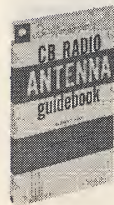
CHAPTER CONTENTS: 1. Transistors 2. The Transistorized Two-Way Radio Receiver 3. Receiver Alignment and Troubleshooting 4. The Transistorized FM Communications Transmitter 5. The Transistorized Mobile Power Supply 6. Tone-Coded Squelch Systems 136 pp.; 5½" x 8½". No. TRT-1 \$2.95

Two-Way Mobile Radio Handbook

by Jack Helmi. Presents the complete story on mobile radio for buyers and users of the equipment, as well as those interested in mobile-radio servicing. Covers the operational theory of basic systems, re-

(Continued on next page)





CB Radio Antenna Guidebook

by David E. Hicks. This authoritative volume presents a thorough guide to the selection, installation, operation, and servicing of Citizens band antennas. Written for anyone who plans to install or operate a CB radio, as well as present owner-operators who wish to improve operating range, this guidebook fully explains the principles of the various types of available antennas. Assuming no prior knowledge of antenna design and installation, it includes detailed discussions regarding what communicating ranges to expect under various conditions, points to consider in selecting and installing both mobile and base station antennas, and how to improve the efficiency of existing antenna systems.

CHAPTER CONTENTS: 1. The Antenna System 2. Characteristics of Radio Waves 3. Antenna Characteristics 4. Typical CB Antennas 5. Base-Station Antenna Installation 6. Mobile-Antenna Installations 7. Improving Existing Antenna Systems 8. Servicing and Testing Antenna Systems. 136 p.; 5½" x 8½". No. CAH-1 \$2.50

ceivers, transmitters, control systems and power, and servicing of mobile radios. Pointers on setting up the shop for servicing mobile radios are also included. Profusely illustrated with photos, drawings, and diagrams; especially written for anyone needing a down-to-earth

description of two-way radio equipment and circuitry.

CHAPTER CONTENTS: 1. Basic Systems 2. The Basic Receiver and Front-End Circuits 3. IF Systems in Receivers 4. Audio Squelch and AFC Circuits in Receivers 5. Transmitters 6. Control Systems 7. Antenna Systems 8. Power 9. Servicing 10. Setting up the Shop 208 pp.; 5½" x 8½". No. MRS-1 \$3.95

ABC's of Citizens Band Radio

by Len Buckwalter. Explains the functions, principles of operation, regulations, and setup and operating procedures for CB radio equipment. Starting with the background and development of the Citizens Radio Service, the author tells how you can become actively engaged in CB radio. Using illustrations and schematics to enhance the easy-to-understand text, the book explains how to obtain an FCC license, and how to efficiently set up and operate CB radio equipment. A special section is included on FCC restrictions, typical violations, and CONELRAD. Chapters on circuit operation and troubleshooting are of particular interest to those with some technical background.

CHAPTER CONTENTS: 1. Introduction 2. Licensing and Eligibility 3. Choosing Equipment 4. How The Transceiver Works 5. Antennas 6. Installation 7. Tuning Up 8. How to Operate 9. Troubleshooting 10. The FCC and You. Appendix lists all field offices. 96 pp.; 5½" x 8½". No. ACR-1 \$1.95

Basic Electricity 4. Radio Power Supplies 5. Electrical Measurements 6. The Radio Transmitter 7. Legal Aspects of Transmitter Adjustment and Operation 8. Examination Procedure 9. "You're on the Air!" 10. Operating Procedure (8 Appendices: Glossary of Standard Radio and Electrical Terms; FCC District Offices; Radio-Amateur Novice Bands and Types of Emission; Radio-Operating ("Q") Signals; Radio-Operating Abbreviations; Periodicals; Signal-Reporting System; FCC License Form 610 112 pp.; 5½" x 8½". No. HAP-1 \$1.50

So You Want To Be A Ham

by Robert Hertzberg, W2DJJ. Completely revised and enlarged to include everything the would-be radio amateur needs to know to enter the fascinating fraternity of hamdom. Illustrates and gives the price ranges of various receivers and transmitters, including mobile. It tells where FCC offices are, and how to get a license by mail. Also given are abbreviations and the international "Q" code, plus the phonetic alphabet. A must for those going for their novice ticket, and an excellent refresher and reference for the veteran key pounder.

CHAPTER CONTENTS: 1. The Amateur Radio Game 2. Conquering the Code 3. A Good Receiver Is a Basic Requirement 4. Getting Your Ticket 5. Going on the Air With a Transmitter 6. Going Mobile 7. Test Equipment and Safety Measures 8. How to be a Good Operator 9. The Organization of Amateur Radio 10. The Ham in Military Service 11. Electronics as a Career 192 pp.; 5½" x 8½". No. HAM-2 \$2.95

Building Up Your Ham Shack

by Howard S. Pyle, W7OE. As useful to the veteran radio amateur as to the novice ham. Provides all the pertinent data on what equipment is needed to place a station on the air, and tells how to choose equipment so the station can be upgraded at minimum cost. Discusses factory-built and used equipment, kits, military surplus gear, and homemade units. The reader is shown how best to arrange his station, how to most effectively position his equipment, power and light requirements, etc. One chapter on the Ham Workshop describes several layouts, including one that fits into a closet, for those who are cramped for space.

CHAPTER CONTENTS: 1. Introduction 2. Choosing a Receiver 3. Choosing a Transmitter 4. The Radiating System 5. Miscellaneous Equipment 6. Arranging the Station 7. Testing and Measuring Equipment 8. The Novice Ham Workshop 9. Station Supplies, Clubs, and Other Organizations 10. Preparing for Advancement (Four Appendices: Amateur radio bands; the amateur's code; CONELRAD radio alert information; the "C" and "E" frequencies) 128 pp.; 5½" x 8½". No. NHP-1 \$2.50

Amateur Radio Antenna Handbook

by Harry D. Hooten, W6TYH. Explains which antennas to use for various purposes, and how to install them for the most effective results. Encompasses contemporary ham antenna designs, based on the author's personal experience and knowledge gained in over 30 years of actual practice. Provides the most comprehensive and authoritative volume available on the subject. Includes design theory and practical applications, transmission lines, impedance matching, coupling, "home-brew" arrays, and towers. Contains a wealth of essential data, including how to build an antenna and get it into operation. **CHAPTER CONTENTS:** 1. Fundamentals of Radio Wave Propagation 2. Antenna Fundamentals 3. Practical High-Frequency Antennas 4. Transmission Lines 5. Impedance Matching Systems 6. Antenna Coupling Systems 7. Practical Antenna Construction 8. Antenna Towers and Supporting Structures. 160 p.; 5½" x 8½". No. AMA-1 \$2.95

General-Class Amateur License Handbook

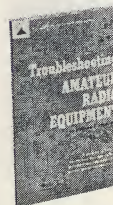
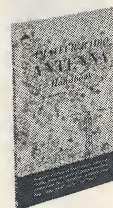
by Howard S. Pyle, W7OE. A complete guide, including typical questions and answers, to prepare the novice or aspirant for the Technician, Conditional, or General-Class amateur radio exam. Typical questions, of the type on the FCC test, are included throughout the book. The answers, plus explanations where needed, are also given.

CHAPTER CONTENTS: 1. License Requirements 2. The Radiotelegraph Code 3. The Written Examination 4. Power Supplies 5. RF Oscillators 6. Intermediate Amplifiers 7. Modulators 8. Basic Electron Theory 9. FCC Regulations 10. General Operating Practices. 128 pp.; 5½" x 8½". No. ALP-1 \$2.50

Troubleshooting Amateur Radio Equipment

by Howard S. Pyle, W7OE. A guide to hams in the repair and maintenance of their own communications equipment. Includes 9 complete sche-

(Continued on next page)



AMATEUR RADIO



ABC's of Ham Radio

by Howard S. Pyle, W7OE. This book grew out of the author's experiences in conducting an adult evening training class on the subject. Including all the data needed to understand the basic principles, this volume is unique in that it covers the subject completely, yet doesn't confuse the beginner by including any superfluous data. Includes all the information needed to qualify for the Novice License.

CHAPTER CONTENTS: 1. About the Exam 2. The Radiotelegraph Code 3.

matics of popular transmitters and receivers. Describes the most common causes of failure in amateur equipment, and suggests remedies the ham can perform himself, with the equipment he has on hand.

CHAPTER CONTENTS: 1. Receiver Troubles 2. Transmitter Troubles 3. The Antenna System 4. Accessory

Equipment 5. Preventive Maintenance 6. Mobile Communications Equipment 7. Conclusion (3 Appendices: Common Symbols Used in Schematics; the Standard Color Code Used to Indicate Component Values; Schematics of Some Commercial Ham Equipment).

128 pp.; 5½" x 8½". No. AMP-1 \$2.50

HOBBYIST BOOKS

Having Fun With Transistors

by Len Buckwalter. Beginning and experienced hobbyists, students, or anyone who gets a kick out of building "gadgets" will enjoy constructing the 13 unusual projects included in this new book. Purposely avoiding long drawn-out theory explanations, a short introduction is used to define each project. Easy-to-follow photographs and pictorial diagrams and step-by-step procedures are used to explain how to build each device. For those interested in how they work, schematic diagrams and short paragraphs describing circuit operation are included. While the projects have been specifically planned to provide entertainment, their intrinsic value is in the demonstration of basic principles and applications of transistors.

CHAPTER CONTENTS: 1. Construction Hints 2. Radiomobile 3. Transistor Telephone 4. Lemon-Juice Oscillator 5. Sending Code Over Your House Wires 6. Sherlock Ohms 7. Electronic Eye-Ball 8. Home Broadcaster 9. Musical Oatmeal Box 10. Flip-Flop 11. Toddler's Tooter 12. Radio Clock 13. Speaker Mike 14. "Boris" the Talking Skull.

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Electronic Games & Toys You Can Build

by Len Buckwalter. This is a "just-for-fun" book. Try as you may, you won't find any complex electronics theory anywhere — just step-by-step instructions, construction photos and detailed wiring-construction diagrams that show you how to build 15 fascinating electronic games and toys, many of them in one evening. Each of the projects is an original device created and built by the author. Some challenge the player's

judgement, some test manual dexterity, others achieve magical effects.

CHAPTER CONTENTS: 1. Construction Techniques 2. "Test Your Nerve" 3. "Reaction Timer" 4. "Crack the Combination" 5. "Penny Pitch" 6. "Electronic Card Trick" 7. "The Flipper" 8. "The Maze" 9. "Space Shot" 10. "Moving Mouse" 11. "Party Pooper" 12. "Countdown" 13. "Find the Airport" 14. "Mind-Reading Act" 15. "The Musitron"

128 pp.; 5½" x 8½". No. EGT-1 \$2.50

Electronics Experiments & Projects

by Len Buckwalter. This book not only makes learning the principles of electronics easier, but fun as well. Through the use of unique and original experiments, the reader quickly learns the composition and purpose of all the basic electronics components, and actually constructs several of them! Projects include a low-power communications system, alarm detection device, weather station, and electronic computer. These devices are easily assembled from inexpensive parts with no other knowledge than that provided in the book.

CHAPTER CONTENTS: 1. Experimenting on a Breadboard 2. Construction of Electronic Components and How they Work 3. Electronic Sending and Receiving 4. Detection, Control, and Alarm 5. Man-Made Lightning 6. An Experiment in Electroplating 7. Weather Indicating Devices 8. Building Your Own Computer

128 pp.; 5½" x 8½". No. ESE-1 \$2.50

ABC's of Electronic Organs

by Norman Crowhurst. Explains the fundamental principles of electronic organs, including theory, development, features and operation. Discusses selecting an organ, and, in block diagram and schematic illustrations, shows what's inside an organ. Includes an entire chapter on maintenance and troubleshooting, as

well as a Glossary of terms. An informative introduction to the subject for owners and potential organ owners, as well as for technicians and students.

CHAPTER CONTENTS: 1. Development of the Electronic Organ 2. Electronic Synthesis of Sound 3. Fundamentals of Electronic Organs 4. Modern Organ Mechanics 5. Choosing an Organ 6. Organ Electronics 7. Maintenance and Troubleshooting

96 pp.; 5½" x 8½". No. ECO-1 \$1.95

ABC's of Tape Recording

by Norman H. Crowhurst. The author has used his unusual talents to produce one of the most practical books ever published on tape recording for the layman. Explains the fundamentals of tape recorders, and discusses points to consider in choosing a tape recorder. Tells how to use a tape recorder for best results, and describes many specific applications for tape recorders in business, the home, and "just for fun." Includes a Glossary, and data on how to judge the quality of recordings, and how to obtain the best quality from different types of recorders.

CHAPTER CONTENTS: 1. Understanding Tape Recorders 2. Choosing a Tape Recorder 3. Using a Tape Recorder 4. Simple Things to do With Tape Recorders 5. Practical Uses for Tape Recorders 6. Advanced Uses for Tape Recorders

96 pp.; 5½" x 8½". No. TAP-1 \$1.50

Introduction To Electronic Servicing for the Beginner

by J. A. Stanley. Whether studying for a profitable profession, or launching an enjoyable hobby, you'll enjoy learning basic troubleshooting methods for radio, TV, hi-fi and stereo, ham gear, etc., the way it is presented in this book. Using the concept that electronic servicing is best learned by doing, the author presents basic troubleshooting methods through discussion, illustration, and project experiments. All projects (every one constructed and tested by the author) become useful pieces of equipment — they're not simply laboratory exercises. Step-by-step instructions, accompanied by detailed drawings, diagrams, and photos,

Electronics for the Beginner

by J. A. Stanley. Because dry theory has no appeal to an exuberant teen-ager or hobbyist eager to learn electronics, the author introduces the beginner to the fundamentals of constructing electronic devices in a practical manner. Each project is increasingly difficult, so the neophyte also picks up a liberal dose of electronic theory along the way. All equipment built is *completely transistorized*. Large, clear wiring diagrams and schematics, plus complete parts lists and templates, make it easy to build any of the projects included. Also contains instructions on how to solder, the color code, how to read schematics, etc.

CHAPTER CONTENTS: 1. Introduction 2. Tools and the Gentle Art of Soldering 3. Building a Trap for Radio Waves 4. The "One Hour" Radio 5. One-Transistor Headphone Amplifier 6. Speaker Amplifier Uses Two Transistors 7. About Parts and Symbols 8. Reading Circuits 9. Easy Pocket Radio 10. So You Would Like To Broadcast? 11. Utility Amplifier 12. Short-Wave Receiver Tunes the World 13. First Step to Hi-Fi and Stereo 14. Three-Transistor Pocket Radio 15. Playing Detective in Electronic Circuits

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make it easy for the reader to construct each item. These devices actually become "guinea pigs" for suggested testing and troubleshooting experiments — techniques you'll be able to apply in servicing kit equipment and other projects you've built.

CHAPTER CONTENTS: 1. Power Supplies—Where It All Begins 2. Testing Power Supplies With a Multimeter 3. Building a Transistorized Signal Generator 4. Building and Testing a Utility Amplifier 5. Building and Testing an AM Tuner 6. Building and Using a Signal Tracer 7. Using Service Literature 8. Applying Service Techniques to a TV Set 9. Servicing Transistor and Auto Radio, Hi-Fi, Stereo, and Ham Rigs.

128 pp.; 5½" x 8½". No. BSJ-1 \$2.50

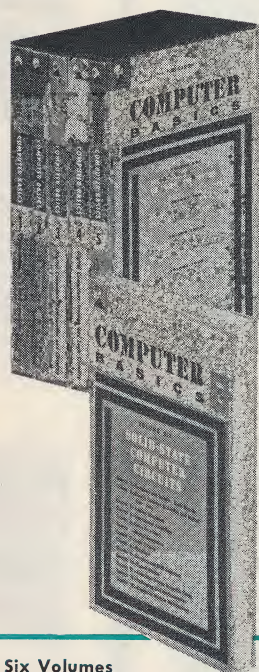
(More Hobbyist Books on page 22)



COMPUTER BASICS

The Encyclopedic 6-Volume Study of ELECTRONIC COMPUTERS

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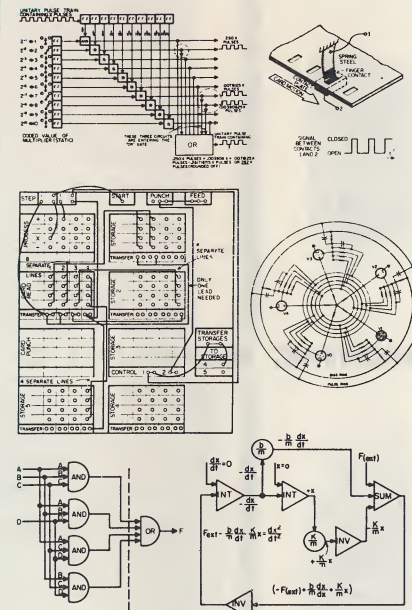
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- CHAPTER 10—Mechanical Computation
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- CHAPTER 6—Wave-shaping Circuits
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- CHAPTER 8—Gating and Logic Circuits

VOLUME FOUR DIGITAL COMPUTERS— STORAGE AND LOGIC CIRCUITRY

A further discussion of digital computer circuits, beginning with a complete analysis of the basics of magnetics, magnetic writing and reading. Storage and core logic. Numbering Systems, auxiliary elements, and computer coding are also included:

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- CHAPTER 4—Numbering Systems
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- CHAPTER 12—Packaging and Mechanization
- CHAPTER 13—Computer Module Maintenance

Electronic Musical Instrument Handbook

by Norman H. Crowhurst. Describes purely electronic and amplified musical instruments. Explains how microphones and special pickups are used for music reinforcement. Discusses electronic equipment necessary for amplification, and how electronic components are used to produce special effects. Includes a complete chapter on purely electronic musical instruments, such as the carillon, Martenot, Ondioline, and Theremin; and describes several music synthesis systems. Of special interest to technicians and hobbyists are the chapters on transducers, electronic circuit elements, and the installation and servicing of electronic musical instruments. This easy-to-follow book also explains the operation, use, and repair of electronic musical instruments.

CHAPTER CONTENTS: 1. Introduction to Musical Instruments 2. Sound Reinforcement by Microphone 3. Sound Reproduction by Pickups 4. Combining Electronics Into the De-

sign 5. Purely Electronic Musical Instruments 6. Transducers for Musical Instruments 7. Electronic Circuit Elements 8. Installation and Service Details. 128 pp.; 5 1/2" x 8 1/2". No. EMI-1 \$2.50

ABC's of Model Radio Control
by Allan Lytel. Written for model builders from 9 to 90, this new book makes it easy for the reader to install and use radio-control equipment. Starts out with a basic explanation of radio-control systems and how they work, and shows the reader how to get started in this fascinating hobby. Describes commercially-available kits and how to select the most suitable one for various purposes. Fully explains how radio codes are used for controlling mechanical actions. CHAPTER CONTENTS: 1. What is Radio Control 2. Choosing Your Radio Model Kit 3. Using Radio Control 4. Fundamentals of Radio 5. Coders and Transmitters 6. Receivers and Decoders 7. Motors and Power Controls 8. You and the FCC. Glossary 96 pp.; 5 1/2" x 8 1/2". No. MOR-1 \$1.95

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Outboard Motor Service Manual

Brand new first edition! You'll find all the facts you need for any repair job on every popular outboard in this practical new guide—the most complete book of its kind ever produced. From tuneups and general maintenance to major repairs and overhauls, this new service guide answers all your maintenance and repair questions. Includes more than 750 models of 15 popular makes including: Atlas Royal; Brooklure; Corsair; Elgin; Evirude; Firestone; Gale; Hiawatha; Johnson; Mercury; Sea Bee; Sea King; Scott; West Bend; Wizard. Practical, step-by-step instructions cover every service procedure. Included are sections on lubrication, ignition, carburetion, power head, etc. Over 600 how-to-do-it illustrations! 256 p.; 8" x 11". No. OUM-1 \$4.95

Servicing Horizontal Sweep Circuits

by Wayne Lemons. A "how-to" servicing book designed to help you solve the many intricate and often obscure troubles which develop in horizontal oscillator-sweep circuits. Describes pertinent factors concerning typical circuit designs, and then discusses specific trouble symptoms and their solutions, based on actual case histories. To help you minimize TV service callbacks, the text also explains how to make circuit measurements, tests, and adjustments. Contains numerous service hints and circuit modifications which will make your servicing jobs easier, and save you time and money. CHAPTER CONTENTS: 1. Horizontal Oscillators 2. Sweep Circuit Troubles 3. High-Voltage Troubles 4. General Troubleshooting 112 pp.; 5 1/2" x 8 1/2". No. HSL-1 \$2.50

TV Diagnosis & Repair

by the PF REPORTER Editorial Staff. Deals with practical servicing procedures for typical TV circuit troubles and their cures. Covers various types of tube problems, such as repeat tube burnouts, unusual tube troubles, and tube changing. Other sections deal with sync and horizontal sweep troubles, such as piecrusting, Christmas-treeing, yoke and flyback troubles, and others. Also covers source-voltage problems, AGC and audio troubles, etc. Deals specifically with the most bothersome day-to-day servicing problems facing the average TV technician, making it a handy reference book for use on the bench or in the home. CHAPTER CONTENTS: 1. Tube Troubles 2. Source-Voltage Troubles 3. Audio Troubles 4. AGC Troubles 5. Sync Troubles 6. Sweep Troubles 96 pp.; 5 1/2" x 8 1/2". No. TDR-1 \$1.50

Solving TV Tough-Dogs

by Robert G. Middleton. Tough-dog problems in TV servicing are recognized by most service technicians as those troubles for which there is no obvious or apparent cure. In other words, "Everything has been tried, without success." Bob Middleton, in this new "how-to" servicing book, explains that there are really very few true tough-dog troubles. Through the use of examples drawn from actual practice, he shows you how to approach the major problems

TV Servicing Guide

by Leslie D. Deane and Calvin C. Young, Jr. Here is the book used by over 100,000 TV service technicians, as complete and up-to-date today as when it was first written. It's a quick servicing guide arranged by TV trouble symptoms, which shows how to apply proper troubleshooting procedures, based on an analysis of trouble symptoms. Includes hundreds of photos of troubles as they appear on the picture tube, and fully discusses possible causes for each symptom. Also gives troubleshooting hints for locating and eliminating various troubles. If you service TV sets and don't have this book nearby at all times, you're needlessly wasting a lot of time. CHAPTER CONTENTS: 1. General Troubleshooting and Isolating Procedures 2. Troubles in TV Tuners 3. Troubles in Video IF and Detector Systems 4. Troubles in Video Amplifiers, DC Restorers, and Picture Tubes 5. Troubles in AGC Systems 6. Troubles in Sync Circuits 7. Troubles in Vertical Sweep Systems 8. Troubles in Horizontal AFC and Oscillator Systems 9. Troubles in Horizontal Output and High-Voltage Systems 10. Troubles in Audio Systems 11. Troubles in Low-Voltage Power Supplies 12. Interference Troubles 132 pp.; 8 1/2" x 11". No. SGS-1 \$2.00

found in TV receivers and how to quickly localize troubles to specific receiver sections. All the techniques involved in analyzing symptoms and troubles are applicable to present-day makes and models. Explains what to look for, how to understand what you see, and the general principles for solving the most typical troubles. Gives analysis techniques for expedient solutions of those perplexing troubles—a must for every service technician. CHAPTER CONTENTS: 1. What Makes a Tough-Dog? 2. No-Picture Troubles 3. Poor-Picture Troubles 4. Framing and Display Troubles 5. Raster Problems 6. Video-Sound Troubles 128 pp.; 5 1/2" x 8 1/2". No. TDM-1 \$2.50

PHOTOFACT Television Course

by the Howard W. Sams Engineering Staff. A revised, up-to-date course on black-and-white TV, concentrating on servicing fundamentals. Step by step, the text describes the functions of important circuits, supported by numerous schematics. Questions appear at the end of each chapter, with answers at the back of the book. A complete self-study course packed with valuable training on modern TV principles, operations, and servicing procedures. Includes 7-page Glossary. Written so anyone with a little background can understand all phases of TV.

CHAPTER TITLES: 1. Cathode-Ray Tube—Beam Formation and Electrostatic Control 2. Cathode-Ray Tube—Electromagnetic Control of the Beam 3. The Camera Tube 4. Power Supplies 5. Resistance-Capacitance Circuit Characteristics 6. Sawtooth Generators 7. Sawtooth Generator Control and Production of Scanning Waveforms 8. Deflection Systems — Commercial Applications 9. The Composite Television Signal 10. Sync-Pulse Separation, Amplification, and Use 11. The Receiving Antenna 12. RF Tuners 13. Video IF Amplifiers and Detectors 14. Sound IF Amplifiers and Audio Detectors 15. Video Amplifiers 16. Automatic Gain Control 17. Receiver Controls—Application and Adjustment.

192 pp.; 8½" x 11". No. TV-2 \$3.95

Color TV Training Manual

By C. P. Oliphant and Verne M. Ray. The most up-to-date volume available on color TV. A comprehensive manual designed to prepare the technician for servicing color TV receivers. Describes the science of color, the requirements and make-up of the composite color signal, color circuits, servicing procedures, plus many other subjects. Includes four-color Colorblocks outlining the use of color test equipment. Contains over 300 illustrations, with 40 pages in full color. 58 full color picture tube photos are invaluable for setup and alignment procedures as well as troubleshooting.

CHAPTER CONTENTS: 1. Colorimetry, the Science of Determining and Specifying Colors 2. Requirements of the Composite Color Signal 3.

Make-Up of the Color Picture Signal 4. RF and IF Circuits 5. Video, Sync, and Voltage-Supply Circuits 6. Bandpass-Amplifier, Color-Sync, and Color-Killer Circuits 7. Color Demodulation 8. The Matrix Section 9. The Color Picture Tube and Associated Circuits 10. Setup Procedure 11. Aligning the Color Receiver 12. Troubleshooting (Six Appendices: Equations; An Explanation of .877 and .493 Reduction Factors; Vectors; Color Pattern Photos; Color-blocks; Glossary)

266 pp.; 8½" x 11". No. TVC-1 \$6.95

Radio & TV Alignment Handbook

by Warren J. Smith. Acquaints the reader with all the pertinent data needed to properly and efficiently align any radio or TV receiver. Fully explains how one can determine when alignment is necessary, what equipment is needed, and how to hook it up, how to follow alignment procedures outlined in service literature (and the purpose for each step), and how to evaluate results. Complete coverage of alignment is given, including VHF and UHF tuner alignment, alignment and adjustment of color TV circuits, and AM and FM receiver alignment

CHAPTER CONTENTS: 1. The Need for Alignment 2. Response of TV Receivers 3. Alignment Equipment and its Application 4. Interpreting Response Curves 5. TV Alignment 6. VHF Tuner Alignment 7. UHF Alignment 8. Color Alignment 9. AM Radio Alignment 10. FM Radio Alignment

160 pp.; 5½" x 8½". No. RTH-1 \$2.95

Radio and TV Trouble Clues

by The Howard W. Sams Engineering Staff. A collection of over 60 unusual "tough dog" troubles, based on actual field experiences with specific radio and TV receivers. A practical reference guide which will help you spot various troubles, and repair them more quickly and easily.

SECTION CONTENTS: 1. TV circuit troubles (tuner; keyed AGC circuits; video amplifier; picture tube; vertical and horizontal sections; power supply; color troubles) 2. Radio servicing case histories; (frequency drift; intermittent; squeals; bass control ab-

normal; treble control less effective; no AM reception; rectifier burnout; replacing transformer in foreign auto radio) 3. Unusual troubles and cures (substituting tubes in series-parallel filament strings; tube failure in series filament string; hot-chassis servicing; a service hint for combinations; noisy operation in portable TV; broken slug; hum problems; obsolete focus coils; remote service for remote unit)

96 pp.; 5½" x 8½". No. RTQ-1 \$1.50

Bench Servicing Made Easy

by Robert G. Middleton. Countless books have been published on TV servicing, but few impart sufficient practical knowledge about troubleshooting techniques to be of much help to the practicing technician. This book goes far beyond mere theory, providing a step-by-step guide to the location of defective components in any TV circuit you're likely to run across. Here, at last, is the TV troubleshooting book servicemen have been looking for but couldn't find. Contains all brand-new material obtained especially for this book, direct from the author's workbench.

CHAPTER CONTENTS: 1. Preliminary Analysis of Picture and Sound Symptoms 2. Troubleshooting RF Tuners 3. Servicing IF and Video-Detector Sections 4. Correcting Video - Amplifier and Picture - Tube Troubles 5. Tracking Down AGC Troubles 6. Pinpointing Horizontal-Sync Troubles 7. Localizing Vertical-Sweep Defects 8. Troubleshooting the Horizontal Section 9. Servicing the Sound and Audio System 10. Low-Voltage Power Supply Troubles 11. Solving Intermittent Problems

160 pp.; 5½" x 8½". No. BSE-1 \$2.95

How To Save Time Analyzing & Tracing TV Circuits

by Milton S. Kiver. This revised edition contains clear-cut, practical suggestions and short cuts showing how to trace circuits in less time. Covers the problems of schematic reading and comparison, the functions of various sections of the TV receiver, the best troubleshooting approach and servicing procedure, how to trace unfamiliar circuits and

PHOTOFACT Guide To TV Troubles

by Donald E. Herrington and C. P. Oliphant. Contains over 240 photos of actual TV picture troubles, keyed to specific defective components in typical circuits. This book, for the first time, shows just what happens to the picture-tube display when any component in the receiver becomes defective. Since a picture-tube display is often the best single clue to the nature of a defect, analysis of the reproduced image is the *simplest*, most effective approach to TV troubleshooting. By making the quick checks outlined to determine the section at fault, and carefully comparing the display obtained with those pictured in the book, the troubleshooting time for the great majority of service jobs will be reduced to just a few minutes. This new guidebook outlines symptoms, analysis checks, and likely suspects for all types of TV troubles, and includes dozens of trouble-symptom and analysis check charts.

SECTION CONTENTS: 1. Tuner 2. Video-IF Amplifiers 3. Video Detectors 4. Video Amplifiers 5. Picture-Tube Circuits 6. AGC 7. Sync 8. Vertical Oscillator and Output 9. Horizontal AFC and Oscillator 10. Horizontal Output and High Voltage 11. Power Supplies.

160 p.; 5½" x 8½". No. PFG-1 \$2.95

printed circuits, etc. Includes schematics of all types of TV receivers. Questions appear at the end of each chapter, with answers at the back of the book.

CHAPTER CONTENTS: 1. From the General to the Specific 2. Differences Between Schematics and Sets 3. Following the DC Power Lines of a Set 4. Where the Boost Voltage Fits in 5. The AGC System — from Beginning to End 6. In and Around the Deflection Systems 7. First Things First 8. What to do When you Meet an Unfamiliar Circuit 9. How to Find Your Way Around Printed Circuits 10. Summary

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Servicing TV Remote Controls

by Sam Marshall. A complete service guide on home TV remote-control systems, with actual analysis of all systems. Provides a clear-cut picture of what a remote control system is, what it does, and how it does it. It delves into the principles of operation of individual circuits and components, and applies these principles to an analysis of the various systems used. Finally, it provides step-by-step troubleshooting procedures for the installation, adjustment, alignment, and troubleshooting of these systems.

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Servicing AGC Systems

by Henry A. Carter and Thomas A. Lesh. Completely revised to include AGC circuit theory for every type of system used, including modern 'BU8 variations. Tells how various AGC systems operate and how to troubleshoot them. Typical AGC trouble symptoms are pictured throughout the book.

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Servicing TV Tuners

by Jess E. Dines. The most comprehensive volume ever published on TV tuners. In addition to describing the mechanical and electrical characteristics of practically every type of TV tuner ever built, hundreds of schematic diagrams and photos are used to complement circuit discussions that go into minutest detail on the purpose of every

component. For use by TV servicemen, students, engineers, and others who need a one-source reference.

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by Jess E. Dines. All about TV video systems, from the mixer to the picture tube. Starts with the fundamentals. Then goes into characteristics, circuits and alignment; circuit variations; construction, replacement, and repair.

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by Jess E. Dines. Explains sync-sweep system operation and circuits. Sync separators and amplifiers, horizontal-AFC circuits, and horizontal and vertical oscillators are discussed and pictured schematically. A large section is devoted to troubleshooting and service hints, with actual photographs of TV symptoms and waveforms.

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Servicing TV Sweep Systems

by Jess E. Dines. Explains sweep-system operation and the functions of the various components in sweep-system circuits — also horizontal- and vertical-sweep circuit variations (such as the flyback circuit). Describes and shows the construction of sweep component parts. Includes troubleshooting and service hints with photographs and waveforms.

CHAPTER CONTENTS: 1. Fundamentals of Sweep-System Operation 2. Sweep-System Circuit Function 3. Horizontal- and Vertical-Sweep Circuit Variations 4. Construction of

Sweep-Component Parts 5. Troubleshooting 6. Service Hints 216 pp.; 5½" x 8½". No. SSD-1 \$2.75

Servicing Transistor TV Receivers

by Milton S. Kiver and Charles R. Gray. The reader is first introduced to transistors and TV transistor circuits. Then, the authors proceed through each section of a TV receiver, discussing the function of transistors in that section. Includes a complete section on servicing, including how tube and transistor TV's differ servicewise, transistor handling and replacement, transistor testing, etc. Although slanted toward the service technician, "Servicing Transistor TV Receivers" is so complete and thorough it will appeal to engineers, designers, students . . . in fact, anyone in electronics.

CHAPTER CONTENTS: 1. Introduction to Transistors 2. Basic Transistor Circuits 3. Transistorized Television Tuners 4. Video-IF Amplifiers 5. Video Detectors, Video Amplifiers, and AGC 6. Television Sound Systems 7. Sync Separators 8. Transistorized Vertical-Deflection System 9. Horizontal-Deflection Systems 10. Servicing 272 pp.; 5½" x 8½". No. KST-1 \$4.50

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by Robert G. Middleton. A picture book of typical TV troubles caused by defective tubes. Explains the function of each stage of a TV set through key block-diagram discussions. Over 150 photos of actual TV picture troubles are accompanied by explanations to help the reader identify which tubes are at fault. A 10-page TV tube trouble chart tells which tubes to replace to correct specific troubles. Over 75 different troubles, arranged by symptoms, are pictured and described.

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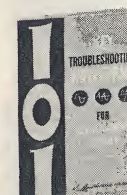
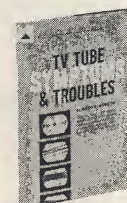
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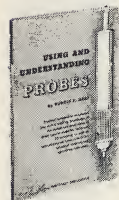
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(Continued on next page)



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Troubleshooting With the VOM-VTVM

by Robert G. Middleton. Explains the operation and use of VOM's and VTVM's, and shows how these instruments can be most expediently used to diagnose and locate the cause for troubles in any section of a TV receiver. Also tells how to measure RF signals and capacitor values, how to test transistors, and how to use the VOM and VTVM in signal-tracing procedures. An entire chapter is devoted to the selection and use of various types of probes to extend the uses of your meters.

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by Howard M. Tremaine, D. Sc., F.A.E.S. Contains latest data on the all-important frequency-dividing system used to channel audio amplifier

frequencies to hi-fi loudspeakers. Goes into complete detail on theory and design in a way that even a teen-ager can understand. For those interested in designing and building their own crossover networks, Dr. Tremaine has included charts and tables to make the choice of components and computation of values as simple as possible.

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by Leo G. Sands. Describes the installation, operation, and maintenance of the various types of sound and intercom equipment used in factories, schools, stadiums, vehicles and other commercial fields. Fully discusses and illustrates amplifiers, input devices, speakers, distribution, control circuits, portable and mobile equipment, installation and maintenance. An invaluable book for technicians and sound specialists.

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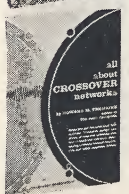
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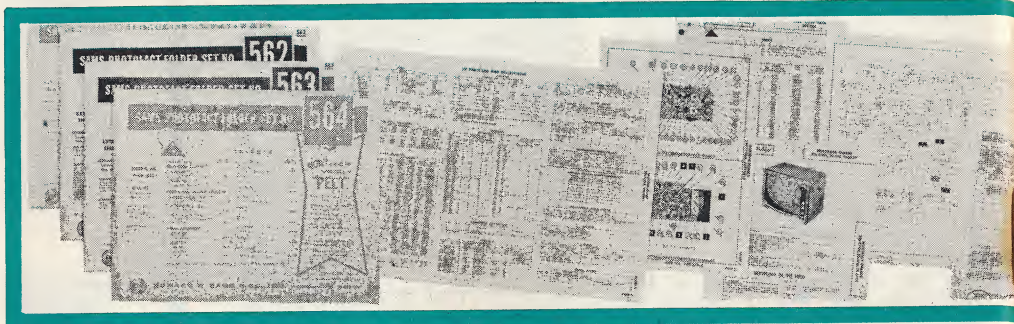
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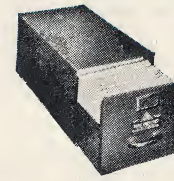
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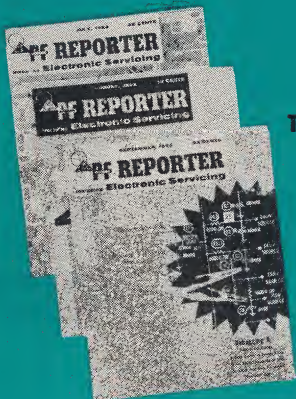
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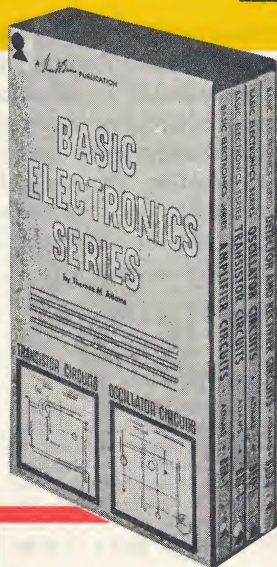
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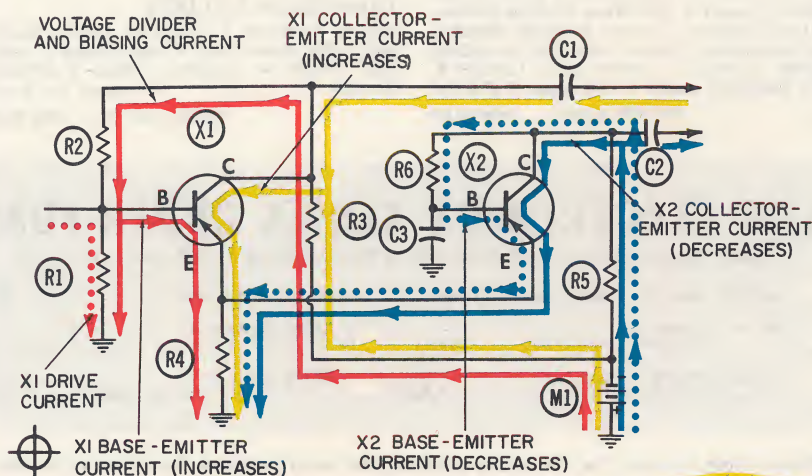


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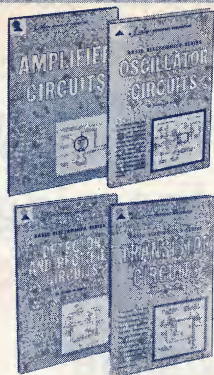
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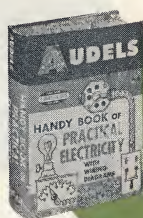
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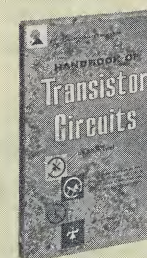


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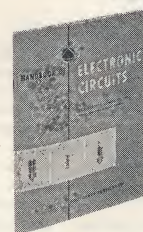
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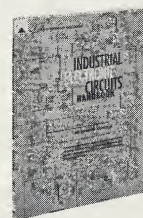
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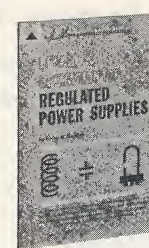
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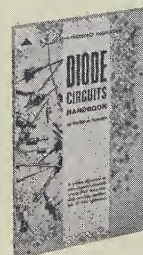
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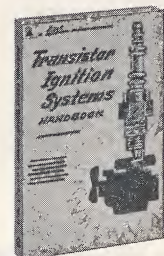
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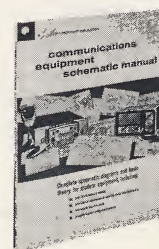
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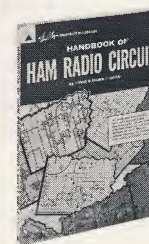
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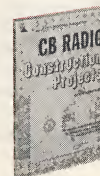
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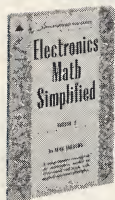
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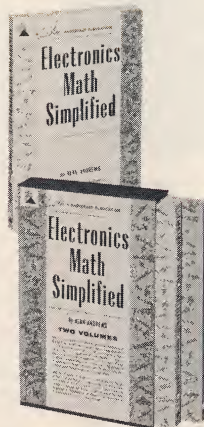
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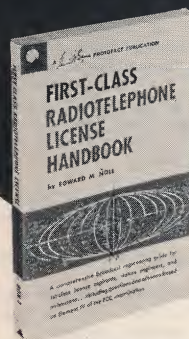
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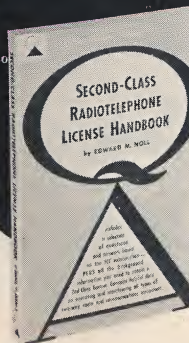
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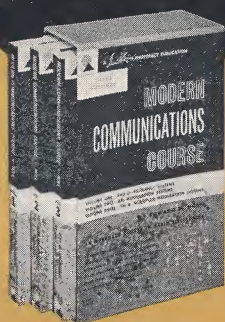
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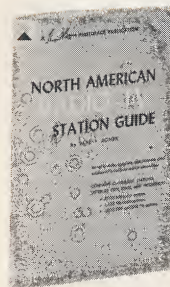
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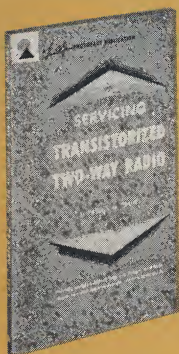
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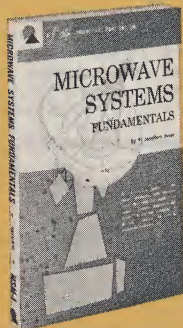
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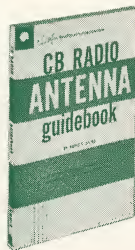
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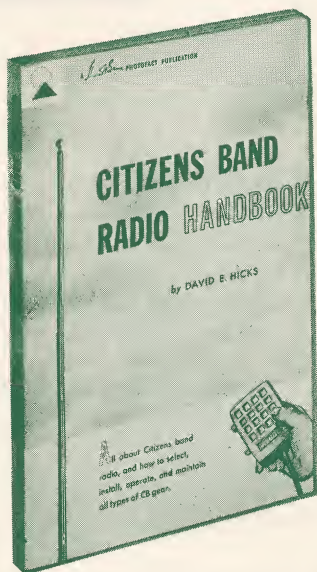
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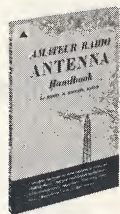
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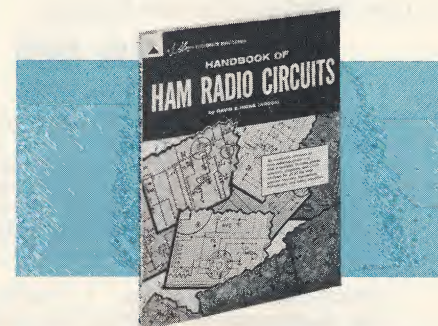
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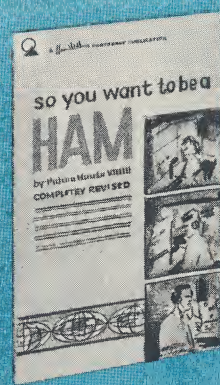
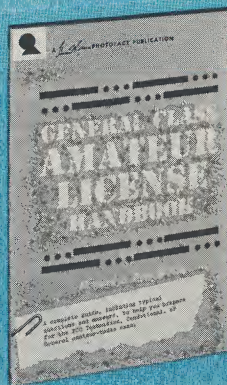
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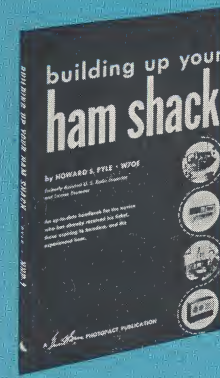
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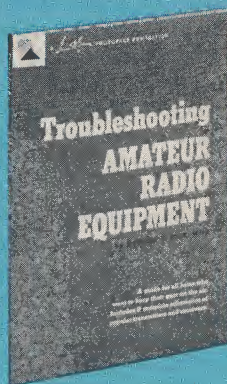
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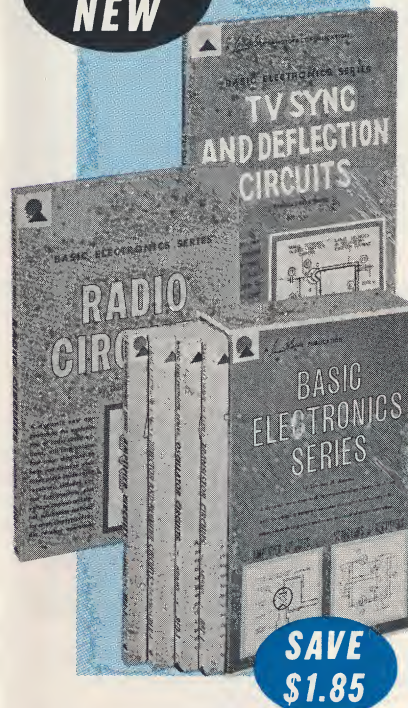
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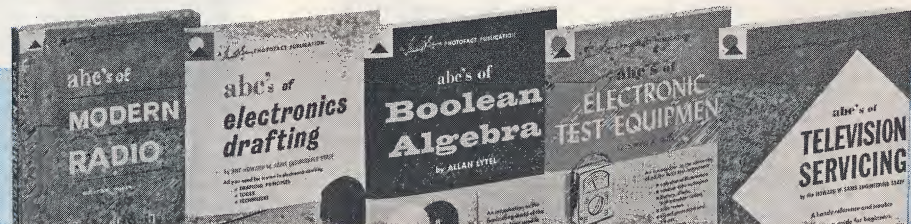
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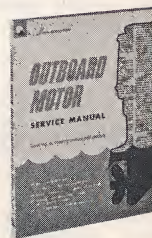
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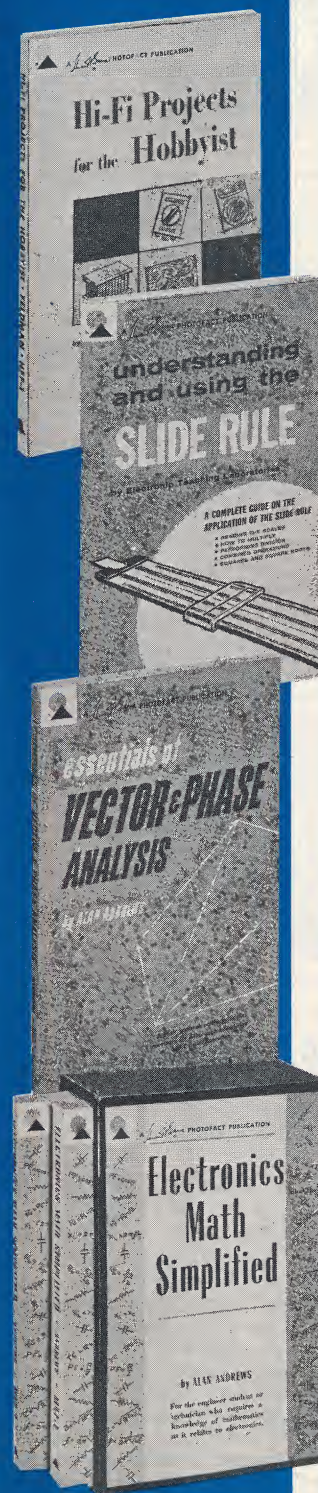
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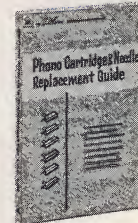
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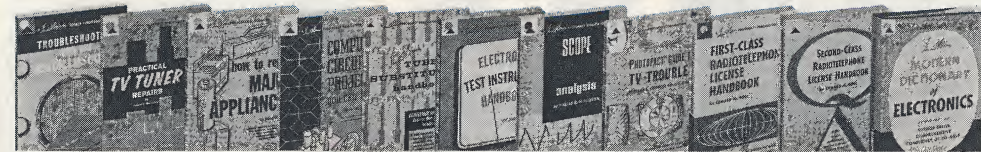
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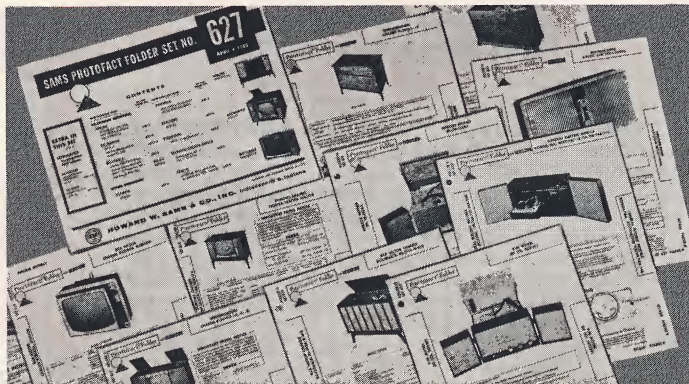
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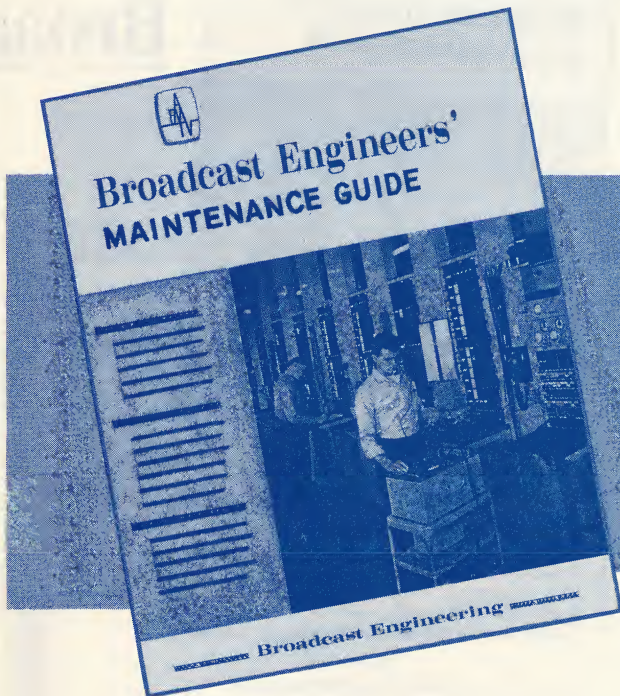
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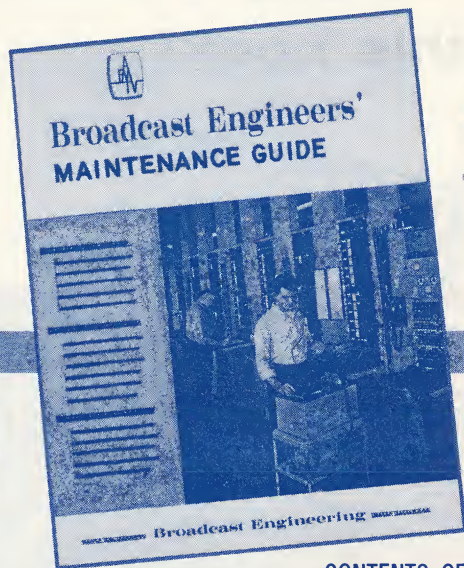
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BRAND NAME	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
ADMIRAL	57-59	71-77	100-103-106-110-114-117-118	126-135-140-144-146-156	177-180-196	201-203-210-219-220-222	256-260-263-266	271-275-280-284-291-300-302-307	311-316-320-321-323-325-326-329	341-350-351-359-360-361-363-367-370-377-380-383-384	387-389-394-395-397-402-404-405-406	424-427-431-438-455-456-471-473	478-480-481-482-495-501-505-506	532-540-541-542	568-572-574-577-578-581-584-593	614-623-624-626-636-640-643-647-653
AIRLINE		72-82-85-89	94-99-107-109-110-116-117-118-119	123-129-142-145-148-149-150-151	164-166-192-193-195-200	206-212-218-221-222-237-238-240	248-256-268-269-270	272-273-280-282-284-289-290-294-299-305-308	313-316-319-324-340	345-347-351-354-359-365-367-377-378-379	394-395-396-401-419-420-421-422	423-424-433-441-443-463	480-504-505-512	513-514-518-520-537-540-559	561-569-572-575-578-587-590-604	609-610-620-625-628-633-637-644-645-651-653-654-656
EMERSON	46	61-76-84-87-90	97-106-108-109-113-114-116-119	125-126-128-130-131-133-137-138-142-146-148	166-167-169-181-182-183-184-190-195-197	202-206-211-218-235	243-240-263-269	275-291-296-299-304-308	313-318-319-322-331	342-354-360-383-384	387-400-406-408-410-412-416	419-420-456	493-498-502	517-521-556	592-595-597	639-648
G E	53	63-69-78-81	96	123-125-141-152-158	161-166-176-180-184-194-196	201-225-229-237	242-264-265	275-292-293-297-310	313-326-328-331-337	342-344-352-359-381-383	391-397-409-416	432-465	483-489-512	519-543	565-582-587	613-628-632-654
HOFFMAN		63		127-141-144-150-159	168-194-195	201-205-211-219-221-236	249-250-254-256-257	277-284-303-305-308	312-321-328-329-330-337	366-370-371-372-373-376-377-378-380-385	393-398-400-417	430-442-455	477-478-488-489-499-500-507	524-525-528-543		
MAGNAVOX		62-82	119	131-135-148-155	161-168	205-226-239-240	263	278-287-291-304-310	314-317-323-325-329-331	344-346-347-348-350-358-360-363-369-370-375	386-389-392-398-402-404-411	446-447-448-454	478-483-494-497-508-510	511-517-554	588-591-602	653
MOTOROLA	51-55	67-71-73-77-82-83	92-93-102-106-111-112-115	121-122-152-158-159	165-167-171-173-174-183-187-191-192-194-197	214-217-233-237	253-269	272-278-280-283-295-302-306-307-309-310	312-315-316-327-329-330	343-345-350-357-366-368-369-371-375-382-384	393-397-399-401-421	435-437-440-444-445-464-468	470-481-488-503-504	515-516-520-533-548	561-564-574-579-592-594-596	612-615-616-622-627
MUNTZ			96-108-116	159	163-164	207-208-230-236		274	311	341-342-352	409	442-444	490		603	645-646
OLYMPIC	58	67-85	106-109	126-139	182-196	214-216		288-290-303-306-310	327-336-337-338-340	341-362-365-381-382	391-395-397-415-416-417	435-438-460-464	479-480-484-485-486-508-509	549-550-531-552-554-555	589-596-598-607-608	613-618-635-637-638-647-649-656
PHILCO	53	68-70-77-89	92-94-110-114-115	123-125-128-132-135-136-138-140-148-159	171-179-181-185-186-190-191-196	201-203-213-223-224-226-227-231-236	241-260-267	276-278-280-298-299-305-309	318-321-325-330-332-335-340	344-348-349-362-374-376	387-399-403-405-406-407-408-409-423-425	429-434-439-441-444-466	475-476-479-484-511	531-555	580-583-589-590-591-600	644-650-651-652
RCA VICTOR	54	70-74-85-88-90	93-108-109-110-111-113-118-120	122-134-139-143-146-156-157-158-160	169-184-190-193-197	202-206-207-208-209-219-228-230-232-235	242-245-252-258-268-269	272-273-277-279-282-289-294-300-301-306-308	312-314-315-322-323-334-336	343-345-346-347-353-354-358-360-375	386-390-392-393-395-396-398-399-400-403-415-418-419-420	428-433-436-453-457-459-460	461-462-463-489-513-517-522	526-527-529-536-550-553-559	562-563-585	619-629-632-640-647-649-653-655
SILVERTONE	49	66-79-84	95-97-102-104-115-118	121-130-139-142-144-149-156-157-160	161-165-181-193-198-199	201-203-205-206-207-212-217-218-220-225-227-230-235	244-245-247-253-257-264-267-269-270	271-276-279-280-281-282-289-292-293-300-308	325-329-330-333-339	368-370-378-380	388-389-390-391-397-400-405-411-417-423	426-440-450-459-461-462	481-486-510-514	515-518-530-535-566	566-567-571-573-581-584-595-599-601-606	642-646-651-652-655
SYLVANIA			92-96-99-103-113-120	124-128-131-137-154	163-174-176-178-181-182-183-187-189-192	210-212-220-229-234	245-248-255	281-285-286-289-300-306	319-324-328	341-352-360-379-384	389-391-409	427-434-447	472-477-500-509	539-560	585-604	626-638-646
TRAVLER		86	108	146-150-156-159	162-170-171	240	268	288-301-303	330-331-333-334-335-337-338	349-371-372-380-384	394-399-401-402-403-412-413-414-415	439-443-453-454-457-465-467	478-490-492-501-506	516-533-536-541-542-556-557		620-622
TRUTONE		68-69-70-77	105-113-119-120	134-136-145-147-151-154-161	177-179-180-185-188-194	203-204-207-210-215-224-229-232-233-238	242-243-244-248-249-260-261-265-269	271-287-293-298-301-307	315-316-323-325-327-328-335	343-346-349-354-355-357-361-362-364-372-375-377-382	388-389-394-395-396-398-402-403-405-406-418-421	428-451-460	472-474-487-489-499	519-521-522-526-546-558-560	563-564-565-566-567-570-600-602	615-617-619-623-624-626-632-635-637-650
WESTINGHOUSE		65-78-84-91	95-97-98-100-103-105-107-112-114-116-120	122-127-129-133-137-150-154-157-160	164-167-172-174-176-177-180-185-186-190-192-193	202-212-214-215-233	241-252-253-255-259-270	274-281-286-290-294-296-305	311-313-320-332	345-350-355-356-357-358	387-388-392-397-399-409-411	435-437-439-446-451-465	485-486-487-490	529-534-535-558	577-593-601	617-621-641-644-645-648-651
ZENITH		64	93-95-98-114-118-120	144-151-159	184-187-214-219	220-223-232-239	259-261-267	276-286-292-301-306-307-310	314-317-330-333-334-335-338-340	341-342-343-357-367-372-374-376-379-383-385	388-390-393-394-401-406-407-408	426-429-430-448-449-452-466-467-469	484-486-487-488-489-491-492-493-496-507	523-524-525-528-547-549-551-552-557	569-570-575-580-586-599-605	607-609-611-625-630-631-633-634-635-655



ORDER FORM

PHOTOFACT® LIBRARY EASY-BUY PLAN

HOWARD W. SAMS & CO., INC., 4300 WEST 62ND STREET, INDIANAPOLIS 6, INDIANA

FOR SIMPLIFIED INSTRUCTIONS, SEE REVERSE SIDE

1

I understand I may select and order a library of PHOTOFACT Sets (minimum 60 Sets) and receive file cabinet bonuses as explained below. I also understand there will be no interest or carrying charges added to this contract and that all merchandise on the order will be shipped transportation charges PREPAID from Indianapolis, Indiana (Within continental limits of U.S.A.).

2

CHECK PHOTOFACT SETS TO BE ORDERED ON THIS PLAN

1963-1964-1965 MONTH OF PUBLICATION

1	31	61	91	121	151	181	211	241	271	301	331	361	391	421	451	481	511	541	571	601	631	661 Oct.	691 Apr.	721 Oct.	751 Apr.
2	32	62	92	122	152	182	212	242	272	302	332	362	392	422	452	482	512	542	572	602	632	662 Nov.	692 May	722 Nov.	752 May
3	33	63	93	123	153	183	213	243	273	303	333	363	393	423	453	483	513	543	573	603	633	663 Nov.	693 May	723 Nov.	753 May
4	34	64	94	124	154	184	214	244	274	304	334	364	394	424	454	484	514	544	574	604	634	664 Nov.	694 May	724 Nov.	754 May
5	35	65	95	125	155	185	215	245	275	305	335	365	395	425	455	485	515	545	575	605	635	665 Nov.	695 May	725 Nov.	755 May
6	36	66	96	126	156	186	216	246	276	306	336	366	396	426	456	486	516	546	576	606	636	666 Nov.	696 May	726 Nov.	756 May
7	37	67	97	127	157	187	217	247	277	307	337	367	397	427	457	487	517	547	577	607	637	667 Dec.	697 June	727 Dec.	757 June
8	38	68	98	128	158	188	218	248	278	308	338	368	398	428	458	488	518	548	578	608	638	668 Dec.	698 June	728 Dec.	758 June
9	39	69	99	129	159	189	219	249	279	309	339	369	399	429	459	489	519	549	579	609	639	669 Dec.	699 June	729 Dec.	759 June
10	40	70	100	130	160	190	220	250	280	310	340	370	400	430	460	490	520	550	580	610	640	670 Dec.	700 June	730 Dec.	760 June
11	41	71	101	131	161	191	221	251	281	311	341	371	401	431	461	491	521	551	581	611	641	671 Dec.	701 June	731 Dec.	761 June
12	42	72	102	132	162	192	222	252	282	312	342	372	402	432	462	492	522	552	582	612	642	672 Jan.	702 July	732 Jan.	762 July
13	43	73	103	133	163	193	223	253	283	313	343	373	403	433	463	493	523	553	583	613	643	673 Jan.	703 July	733 Jan.	763 July
14	44	74	104	134	164	194	224	254	284	314	344	374	404	434	464	494	524	554	584	614	644	674 Jan.	704 July	734 Jan.	764 July
15	45	75	105	135	165	195	225	255	285	315	345	375	405	435	465	495	525	555	585	615	645	675 Jan.	705 July	735 Jan.	765 July
16	46	76	106	136	166	196	226	256	286	316	346	376	406	436	466	496	526	556	586	616	646	676 Jan.	706 July	736 Jan.	766 July
17	47	77	107	137	167	197	227	257	287	317	347	377	407	437	467	497	527	557	587	617	647	677 Feb.	707 Aug.	737 Feb.	767 Aug.
18	48	78	108	138	168	198	228	258	288	318	348	378	408	438	468	498	528	558	588	618	648	678 Feb.	708 Aug.	738 Feb.	768 Aug.
19	49	79	109	139	169	199	229	259	289	319	349	379	409	439	469	499	529	559	589	619	649	679 Feb.	709 Aug.	739 Feb.	769 Aug.
20	50	80	110	140	170	200	230	260	290	320	350	380	410	440	470	500	530	560	590	620	650	680 Feb.	710 Aug.	740 Feb.	770 Aug.
21	51	81	111	141	171	201	231	261	291	321	351	381	411	441	471	501	531	561	591	621	651	681 Feb.	711 Aug.	741 Feb.	771 Aug.
22	52	82	112	142	172	202	232	262	292	322	352	382	412	442	472	502	532	562	592	622	652 Sept.	682 Mar.	712 Sept.	742 March	772 Sept.
23	53	83	113	143	173	203	233	263	293	323	353	383	413	443	473	503	533	563	593	623	653 Sept.	683 Mar.	713 Sept.	743 March	773 Sept.
24	54	84	114	144	174	204	234	264	294	324	354	384	414	444	474	504	534	564	594	624	654 Sept.	684 Mar.	714 Sept.	744 March	774 Sept.
25	55	85	115	145	175	205	235	265	295	325	355	385	415	445	475	505	535	565	595	625	655 Sept.	685 Mar.	715 Sept.	745 March	775 Sept.
26	56	86	116	146	176	206	236	266	296	326	356	386	416	446	476	506	536	566	596	626	656 Sept.	686 Mar.	716 Sept.	746 March	776 Sept.
27	57	87	117	147	177	207	237	267	297	327	357	387	417	447	477	507	537	567	597	627	657 Oct.	687 Apr.	717 Oct.	747 Apr.	777 Oct.
28	58	88	118	148	178	208	238	268	298	328	358	388	418	448	478	508	538	568	598	628	658 Oct.	688 Apr.	718 Oct.	748 Apr.	778 Oct.
29	59	89	119	149	179	209	239	269	299	329	359	389	419	449	479	509	539	569	599	629	659 Oct.	689 Apr.	719 Oct.	749 Apr.	779 Oct.
30	60	90	120	150	180	210	240	270	300	330	360	390	420	450	480	510	540	570	600	630	660 Oct.	690 Apr.	720 Oct.	750 Apr.	780 Oct.

3

Total Number of PHOTOFACT Sets _____ @ \$1.95 each (minimum order 60 Sets) \$ _____

Number of single drawer all-steel file cabinets to be shipped FREE _____

Number of 4 drawer all-steel cabinets to be shipped FREE _____ (One allowed for each 180 sets ordered) Limited offer

(One allowed for each sixty (60) sets ordered. A certificate will be sent for odd quantities other than a basic multiple of 60 PHOTOFACT Sets)

4

Number of single drawer file cabinets @ \$9.95 each _____ \$ _____

Bases for single drawer file cabinets @ \$2.50 each _____ \$ _____

10

TOTAL COST SAMS BOOKS OR SPECIALIZED VOLUMES ADDED TO YOUR PHOTOFACT LIBRARY ORDER . . . \$ _____

Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
_____	\$ _____	_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____	_____	\$ _____
_____	\$ _____	_____	\$ _____	_____	\$ _____

5

TOTAL COST . . \$ _____

8

☐ Please add this order to my present Easy Buy Contract. I understand you will adjust my payments, therefore, I am attaching my present Easy-Buy coupon payment book.

6

☐ I enclose my down payment of \$10.00 and agree to pay the balance of \$ _____ in _____ equal monthly payments. I prefer to make my payments the _____ day of each month.

Until full payment is made, I agree that the title and right of possession of the merchandise shall remain in you, that I will not sell, remove or encumber the same without your written consent, that I assume and shall be responsible for all loss or damage to said goods, and that upon default of any payment or payments, you may, at your option, take back the merchandise or affirm the sale and hold me liable for the full unpaid balance.

Dated this _____ day of _____, 19____. Your Signature _____ (Purchaser)

7

MY SAMS DISTRIBUTOR IS:

Name _____
Address _____
City _____ Zone _____
State _____

Please ship order to my business name and address shown below.

Name _____
Address _____
(Do Not Use P. O. Box Number)
City _____ Zone _____
State _____

PER SALESMAN: _____

COMPLETE THE INFORMATION ON REVERSE SIDE
HOWARD W. SAMS & CO., INC., 4300 WEST 62ND STREET, INDIANAPOLIS 6, IND.

SIMPLIFIED INSTRUCTIONS

1. Read paragraph carefully.
2. Check PHOTOFACT Sets to be ordered. Now PHOTOFACT Sets may be ordered up to one year in advance as part of this contract. The new sets will be delivered automatically each month by the Sams distributor.
3. Total the quantity of PHOTOFACT Sets ordered, then multiply by \$1.95 for cost.
4. Check your selection of free single-drawer cabinets or four-drawer cabinets. The special four-drawer cabinet offer is available only till May 15, 1964. Indicate any extra quantity of single-drawer cabinets (\$9.95) and bases (\$2.50), if required.
5. Add the cost of PHOTOFACT Sets, file cabinets and Sams books (if ordered) for total cost.
6. You now have up to 30 months to pay on this Easy-Buy contract. The down payment, regardless of the amount of the contract, is only \$10. Monthly payments are easy to figure. Divide the amount of the contract less the \$10 down payment, by the number of months you want to pay (30 months or less). By this method, it is up to you to select the amount you wish to pay each month.

Example: Your contract amount to \$610
 Less down payment 10
 Balance \$600

If you want to pay balance over 15 months, divide \$600 by 15 months for a monthly payment of \$40. If you want to pay balance over 20 months, divide \$600 by 20 months for a monthly payment of \$30.

7. Sign the contract and take it with your down payment to your Sams distributor or fill in the name of your Sams distributor and mail contract with down payment to Howard W. Sams & Co., Inc.
 All payment instructions, with payment book, will be mailed to you as soon as your order has been shipped. (Monthly payments are mailed to Howard W. Sams & Co., Inc.)
8. To add this order to a current Easy-Buy contract, check box below, sign the contract, and attach your coupon book to the order. (No additional down payment is required.)
9. Credit data below must be completed before contract can be accepted.
10. To add Sams Books to this contract, list catalog numbers and prices in spaces provided.

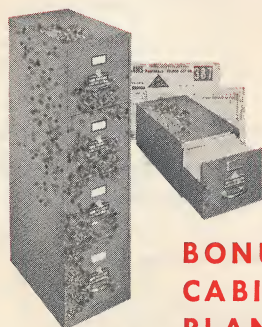
9

(PLEASE PRINT)

EASY BUY CREDIT INFORMATION

Name _____				How Long _____		Telephone No. _____	
Home Address _____				at this _____			
Living _____ (Number & Street or R.F.D. No. & Route) _____ (City & State) _____							
with Parents Yes ☐ No ☐							
Previous Home Address _____ (Address) _____ (City & State) _____				How Long _____			
Single ☐		Number of Dependents _____		If husband and wife both work, give income of each _____		(Years) (Months)	
Married ☐		Including Wife _____		Husband \$ _____		Wife \$ _____	
Age _____		Monthly Income \$ _____					
Draft Classification _____		Reserve Status _____					
Real Estate Holdings—Address _____ (City and State) _____				Present Value \$ _____		Mortgage \$ _____	
List those from whom you purchase on a charge basis. PLEASE PROVIDE COMPLETE NAMES AND ADDRESSES.							
1 _____							
2 _____							
3 _____							
Account With _____ (Address) _____ (City & State) _____				Savings ☐			
Name of Bank _____				Checking ☐			

STAY UP-TO-DATE AND SAVE WITH A PHOTOFACT SUBSCRIPTION!



**BONUS
CABINET
PLAN**

YOUR CHOICE OF:

- Single-Drawer Cabinets.
One Free with 60 Coupons
 - Deluxe 4-Drawer Cabinet.
Now PHOTOFACT subscribers can apply file cabinet certificates toward the purchase of a four-drawer cabinet.
- 70 Certificates plus \$27.95
 140 Certificates plus \$21.95
 210 Certificates plus \$14.95
 Includes shipment direct to your door.

Keep up with the latest in electronic servicing—and save 30 cents per set—with a subscription to PHOTOFACT. Regular PHOTOFACT subscribers (buyers of all new sets of PHOTOFACT Folders each month as issued) receive their PHOTOFACT Folders in a special envelope with a "Bonus" Certificate coupon on the flap. Coupons may be applied toward the File Cabinet of your choice. In addition subscribers enjoy the advantages of valuable added Bonuses in the form of advance schematics, special instructional data and information.

As a PHOTOFACT purchaser you can sign up for NEW PHOTOFACT sets two ways:

- ① You may include new PHOTOFACT sets published up to one year in advance (60 sets) on your contract. Your new PHOTOFACT sets will be delivered by your distributor as they are issued each month.
- ② Sign up with your SAMS distributor for a regular PHOTOFACT subscription. Your new PHOTOFACT Sets will be billed and delivered by your Sams distributor each month. Use handy order form below.

Enter my order to receive all new SAMS PHOTOFACT SETS (Special \$1.95 price) automatically as published each month (Special Certificate Envelope). Please send to my business name and address below:

Name _____ (please print)

Address _____

City _____ Zone _____ State _____

Please start this subscription the month of _____ 19 _____

Signed _____



HOWARD W. SAMS & CO. INC., 4300 W. 62nd ST., INDIANAPOLIS 6, IND.

BUSINESS REPLY MAIL

no postage necessary if mailed in the United States

postage will be paid by:

HOWARD W. SAMS & CO., INC.

POST OFFICE BOX 558

INDIANAPOLIS, INDIANA • 46206

FIRST CLASS

PERMIT NO. 1076

INDIANAPOLIS, IND.

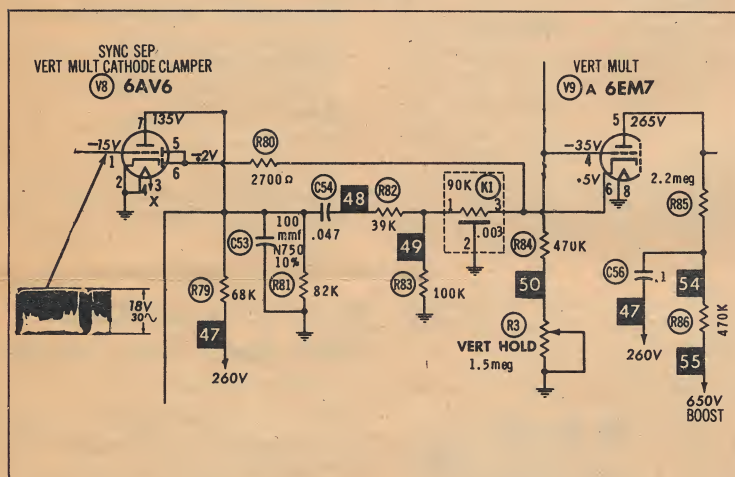


Unusual Circuits "CORNER"

The Cathode Clamper for Vertical Multivibrator

In keeping with PHOTOFACT's aim to provide all the essential data needed to service home-entertainment electronic equipment, this column will, from time to time, discuss new circuitry of noteworthy interest. In this issue, we will discuss the RCA KCS136 Series chassis (PHOTOFACT Folder 585-2), where a special damping circuit is used to stabilize the vertical multivibrator.

You'll notice from the schematic (below) that the 6EM7 operates as a conventional multivibrator-output circuit, *except* that the vertical sync input and integrator are connected in the cathode circuit. In usual operation, the cathode voltage changes with plate current, which is controlled primarily by the grid. In this case, however, it is necessary to hold the cathode at a fixed voltage to provide a constant DC reference for the sync input. By "clamping" the cathode through R80 and the diode sections of the 6AV6, this circuit forms a sort of DC restorer for the multivibrator cathode, and prevents any significant shift of the DC reference level.



TIPS FROM...

Photofact Users

I have an unusual way to use PHOTOFACT! I carry the Folder for each Set I expect to service on a day's calls, because I prefer to lay down a drop cloth and do most repairs in the home. One drawback occurs in homes with young children—they're always pestering me. So I solve the problem by giving them the rest of the Folder, and telling them to look at the pictures. If they tear it up, the cost goes right into the bill. Keeps everyone happy!

M. LEFF
New York City

To hold PHOTOFACT Folders conveniently out of the way, but in a position where I could see them easily while I'm working on a set, I fastened two clip-type clothes pins to the wall above my bench. I merely slip the proper Folder into the clothes pins, and it is held neatly and flat for easy observation.

BOB BREWSTER
Los Angeles, Calif.

Have you found a new and unique way to more effectively use PHOTOFACT? If so, send it to THE EDITOR, PHOTOFACT NEWS, 4300 West 62nd Street, Indianapolis 6, Ind. If your tip is accepted for publication, we'll send you a nice surprise.

New A-B-C Folder

continued from page 1...

Stereo Multiplex chassis used with 14 other TV models. No matter what TV chassis is involved, associated coverage is always readily available. This new "easy-to-find-it" package is just another example of the continual improvements in PHOTOFACT to make your job easier and faster.

"Lay Flat" Feature

continued from page 1...

sary jackets to file the non-TV Folders. The supply is adequate to permit the filing of an average of four Folders in each jacket. THE TV JACKETS ARE SUPPLIED WITH EACH SET OF PHOTOFACT FOLDERS.

This new feature will permit the binder user to take advantage of the "lay flat" feature of PHOTOFACT, and all PHOTOFACT users will benefit from the improved layout permitting presentation of more usable data per page.

The Story And The People Behind PHOTOFACT

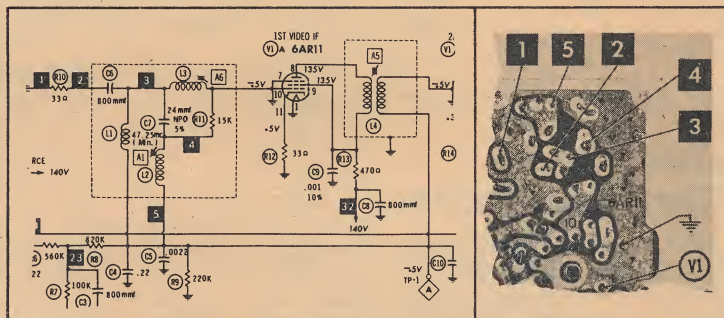


Meet Joe Groves, manager of the PHOTOFACT Analysis and Publications Department. Joe has a real feel for service problems; he once owned and operated his own service shop for seven years.

He is a former president of the Anderson, Indiana, Radio and TV Service Association, and also taught electronics in several local trade schools, including Purdue. Earlier background—graduate of Coyne Electronics School in Chicago; service in the U. S. Navy Submarine Corps in the capacity of fire control and electrician.

Among Joe's responsibilities is the selection and procurement of home-entertainment equipment to be covered in PHOTOFACT. After the selected equipment is received, Joe supervises the PHOTOFACT operation from the beginning of the analysis where the set is actually disassembled, photographed and aligned, completely through the processing cycle, where circuitry is checked and data is accumulated, to the final step where the schematic and finished artwork is prepared—ready for printing. There are 36 technical and publishing people involved in these operations, most of whom have had prior servicing experience. Incidentally, we have around 600 to 700 units in our plant for processing at all times. As a rule, around 250 of these units are actually being processed at a given time.

Being sensitive to service problems, Joe's participation in decisions relative to PHOTOFACT format and company policies affecting distribution of our products is invaluable.



How To Use PHOTOFACT

From time to time, this column will point up helpful features in PHOTOFACT you may have overlooked, and show you how to make the best use of them.

When printed circuit boards are used in the chassis, CircuiTrace points are assigned to each point in the circuit not connected to a tube pin or transistor element. CircuiTrace®, a copyrighted system, permits isolation of defective components and thereby speeds the troubleshooting procedure. A photograph of the printed circuit board, included in the PHOTOFACT Folder, shows all CircuiTrace points by the same number and symbol as those on the schematic diagram. Tube sockets are indicated by

the "V" number of the tube and an arrow pointing to pin 1, unless it is otherwise noted. Transistor elements are indicated by the item number of the transistor, and a letter indicating each element. Once the proper points have been located on the printed circuit board, CircuiTrace effectively eliminates the need for laboriously tracing the foil pattern on the board—making the troubleshooting procedure quite similar to that normally followed in a non-printed board chassis.

Watch For These Latest September Sams Publications

PHOTOFACT Sets 652, 653, 654, 655 and 656

TRANSISTOR RADIO Vol. No. 28
CITIZENS BAND RADIO Vol. No. 4
New Sams books of interest to you now on distributors' shelves:

TV Service Pricing Manual (PRM-1) only \$1.50.

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Communications Equipment Schematic Manual (CEM-1) only \$3.95.

Know Your VOM-VTVM (KVM-1) only \$2.50.

Howard W. Sams Phono. Cartridge & Needle Replacement Guide (RCN-1) only \$1.95.

ABC's of Television Servicing (STA-1) only \$1.95.

Understanding and Using the Slide Rule (SRT-1) only \$1.95.

Service Panel Meets With Sams Executives

continued from page 1...

scriber to PHOTOFACT Folders, analyzed and discussed his own service literature needs.

A major subject of the discussions was the more than doubled release of new entertainment equipment currently being manufactured by the industry, an outpouring which has made necessary an increase in the number of PHOTOFACT Folder Sets required to keep up with equipment output.

The present PHOTOFACT coverage in 5 Sets of Folders per month, plus specialized coverage in manuals, was the prime topic of discussion, and resulted in many comments and suggestions from the panel.

Additionally, physical layout and binding of the new specialized manuals to permit best bench use was studied by the group.

From time to time, servicers are invited to Indianapolis for similar discussions on many phases of Independent Service operation. Such meetings enable the Sams Company to keep its products and services current with the needs of the majority of its customers.

SEPTEMBER 9, 1963
(CANCELS SHEET DATED MAY 27, 1963)

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Many thanks...

for your interest in our publications.

Enclosed is literature describing the many fine Sams technical books available to you. Whatever your field of interest, chances are you'll find several books you'll want to add to your library. All Sams books are profusely illustrated, and are written and edited by recognized authorities.

If you're familiar with PHOTOFACT Folders, you already know this famous service aid is depended on daily by most professional service technicians throughout the country. If PHOTOFACT is new to you, write me for a sample Folder so you can see for yourself its many time-saving features...and why it's the world's finest TV-radio-electronics service data.

In addition to technical books and PHOTOFACT, we also publish PF REPORTER -- the monthly magazine for service technicians. If you want to learn how the experts analyze and solve knotty TV-radio-electronic servicing problems, this is the one magazine to read. Each of its many monthly articles is practical and to-the-point. We also publish Broadcast Engineering, the technical journal of Broadcasting-Communications. A sample copy of either of these two leading magazines is available on request. Or, you can enter your subscription immediately by using one of the enclosed order forms.

Also enclosed is additional information that may be of interest to you. Feel free to ask for further details, and I'll be happy to answer your questions. In the meantime, visit one of the Sams distributors shown on the enclosed list for your book and PHOTOFACT requirements. Incidentally, you'll also find him a good source for electronic parts.

Cordially,

HOWARD W. SAMS & CO., INC.

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P. S. The famous Audel Guides are also now available through Sams distributors. Profusely illustrated, Audel books cover subjects of interest to professional and amateur alike, in just about any field you can name. I think you'll enjoy looking through the enclosed Audel catalog.